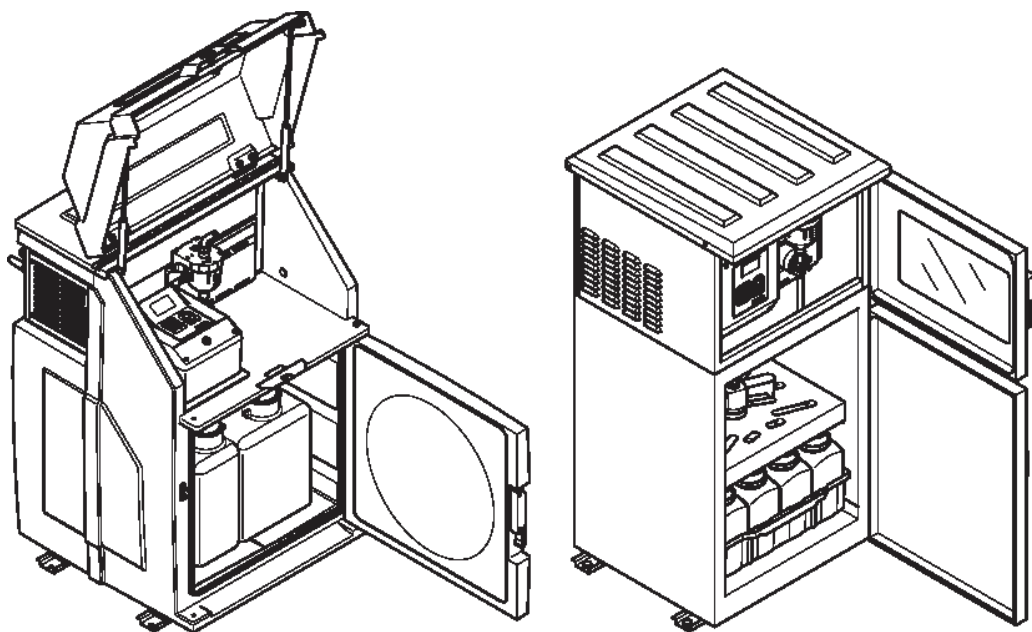


Operating instructions Water sampler

MAXX SP5 S /-B /-M /-F /-A /-MS



Remark:

Access code for program changes or changes of system settings:

Password:

6299

Your password:

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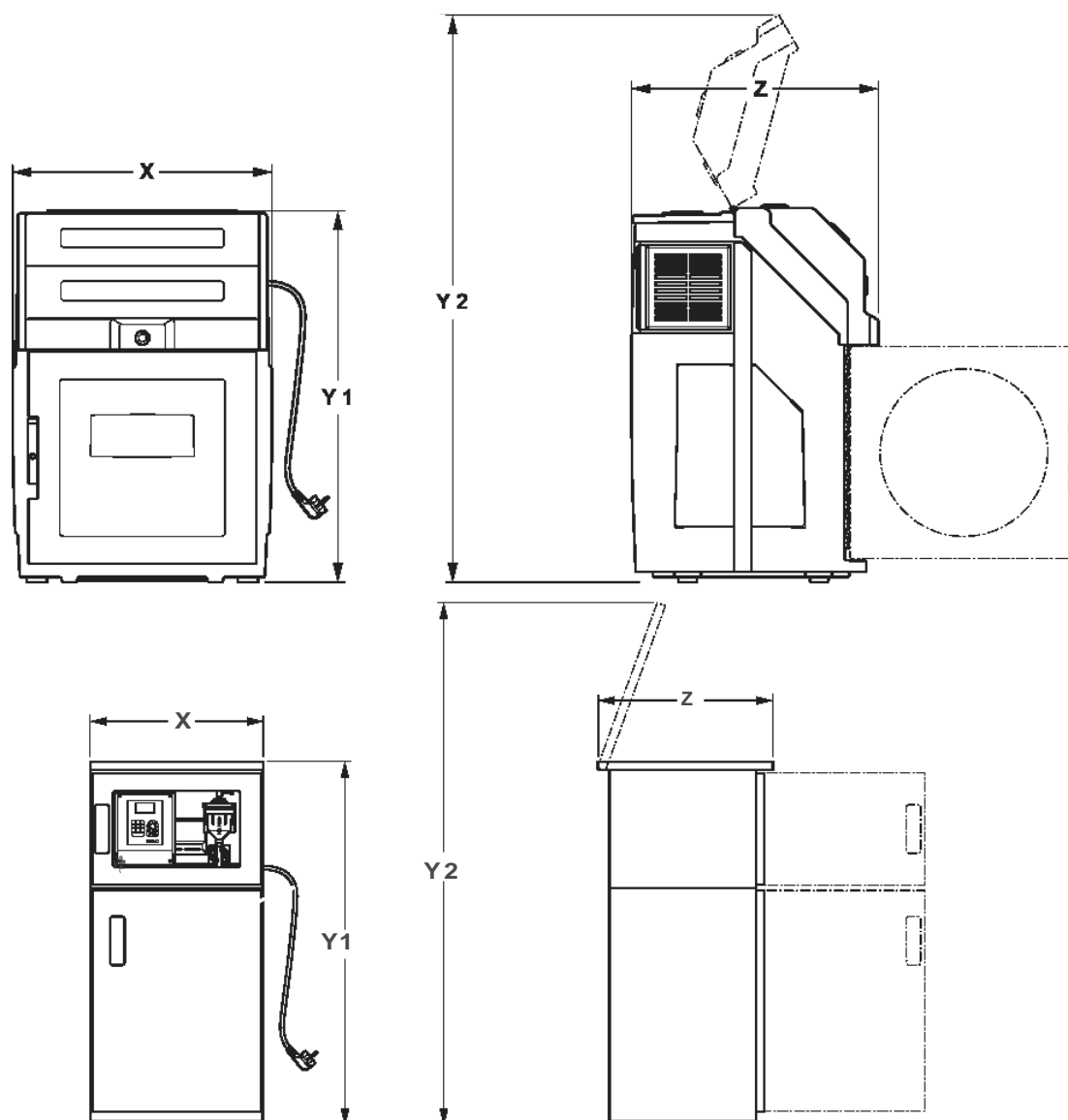
Chapter 1 Specifications

Electrics	
Power supply	230 V/50 Hz., 16 A fuse
Power consumption	Approx. 350 VA
Environment	
Medium temperature	0 to +40 °C
Ambient temperature	–20 to +40 °C
Suction height	< 8 m
General specifications	
Maintenance requirements	Maintenance-free
Weight	See figure 10, page 15 and figure 11, page 15
Dimensions (h x w x d)	See figure 1
Certification	
Certification	CE, Sampling in accordance with ISO 5667 - 2/3-10

Subject to change without prior notice

Specifications

1.1 Dimensions



	X mm	Y 1 mm	Y 2 mm	Z mm
SP5 B	760	1100	1640	725
SP5 S	605	1325	1895	645
SP5 S-M	605	1475	2030	645
SP5 S-F	605	1325	1895	645
SP5 S-F (23 bottles)	715	1415	2120	810
SP5 S-A (2–12 bottles)	605	1325	1895	645
SP5 S-A (24 bottles)	715	1415	2120	810
SP5 S-MS	1200	1690	2260	645

Figure 1 Dimensions

Chapter 2 General information

2.1 Safety information

Please read the entire manual before the equipment is unpacked, set up or operated. Pay attention to all danger and caution statements. Personal injury or damage to the equipment could occur if they are not observed.

To ensure that the protection provided by this equipment is not impaired, do not use or install this equipment in any manner other than that specified in this manual.

2.1.1 Hazard information in this manual



DANGER
Indicates a potentially or imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING
Indicates a potentially or imminently hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION
Indicates a potentially or imminently hazardous situation that could result in minor or moderate injury.

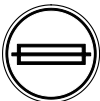

Important note: information that requires special emphasis.

Remark: information that supplements points in the main text.

2.1.2 Warning labels

Read all labels and notices attached to the equipment. Personal injury or damage to the equipment could occur if they are not observed. Any symbol on the equipment will appear along with a caution statement in the manual.

	This symbol, if noted on the instrument, references the user manual for operation and/or safety information.
	This symbol, when noted on a product enclosure or barrier, indicates that a risk of electrical shock and/or electrocution exists.
	This symbol may appear on the product and indicates the need for protective goggles.
	This symbol may appear on the product and identifies the connection point for the protective ground.

	When this symbol appears on the product, it identifies the location of a fuse or a current limiter.
	Electrical equipment marked with this symbol may not be disposed of in European domestic or public disposal systems after 12 August 2005. In conformity with European local and national regulations (EU Directive 2002/96/EC), European electrical equipment users must now return old or end-of-life equipment to the manufacturer for disposal at no charge to the user. For return for recycling, please contact the equipment manufacturer or supplier for instructions on how to return end-of-life equipment, manufacturer-supplied electrical accessories and all auxiliary items for proper disposal.

2.2 General information

2.2.1 Areas of application

The equipment is used for sampling aqueous liquids with a temperature between 0°C and 40°C.

2.2.2 Functional description

The equipment provides temporary storage for liquids of a specified volume so that they can be analyzed.

2.3 Scope of delivery

The equipment is supplied with a tube and a short manual.

If you require further information, you can order the operating instructions (refer to [chapter 6 Spare parts and accessories, page 52](#)) from the manufacturer or you can download it from the Internet.

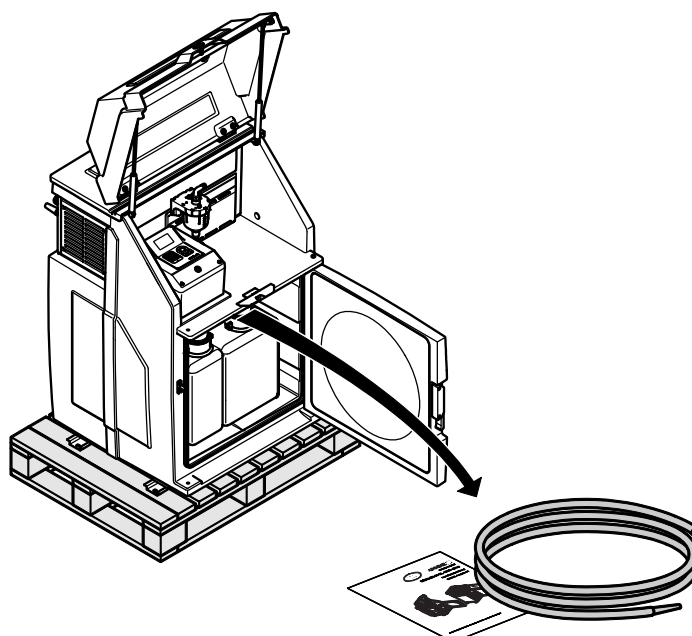


Figure 2 Scope of delivery (SP5 B)

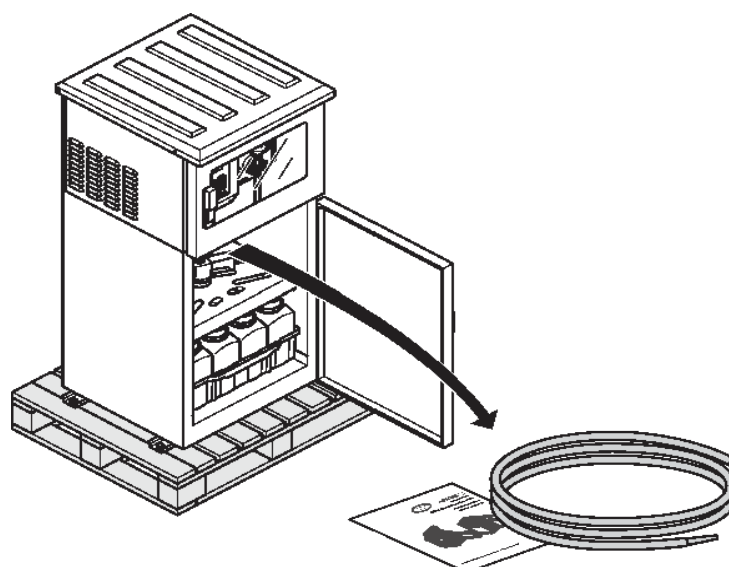


Figure 3 Scope of delivery (SP5 S – SP5 S-MS)

Chapter 3 Installation



DANGER

Only qualified experts should conduct the tasks described in this section.



DANGER

Select an appropriate installation location for the instrument.

Plan out the mechanical mount before positioning poles or drilling holes. Make sure the mount has a sufficient bearing capacity. The dowels must be selected and authorized according to the condition of the wall. The manufacturer shall accept no liability if the instrument is installed incorrectly.

Plan how to lay cables and tubes and their path in advance. Lay the hoses, data cables and power cables without any bends so that they do not pose a tripping risk.

Do not connect the electrical supply to the mains if the equipment has not been wired and fused correctly.

Sufficiently protect the electrical power supply against short circuits.

For the external power supply, always connect a residual-current circuit breaker-(trip current max.: 30 mA) between the mains and the system.

If the equipment is to be installed outdoors, place an overload protection between mains and system.

Products intended by the manufacturer for outdoor use offer a higher level of protection against the penetration of liquids and dust. If these products are connected to a mains outlet with a cable and plug-rather than a permanently connected cable, the plug and outlet are much more susceptible to liquid and dust penetration. The operator must sufficiently protect the plug and outlet against liquid and dust penetration in accordance with local safety regulations. If the instrument is to be used outdoors, it must be connected to a suitable outlet with a protection type of at least IP44 (splash protection).

3.1 Mechanical installation



DANGER
Select an appropriate installation location for the instrument.

Plan out the mechanical mount before positioning poles or drilling holes. Make sure the mount has a sufficient bearing capacity. The dowels must be selected and authorized according to the condition of the wall.

The manufacturer shall accept no liability if the instrument is installed incorrectly.

Plan how to lay cables and tubes and their path in advance. Lay the hoses, data cables and power cables without any bends so that they do not pose a tripping risk.

Remark: For information on installation with optional accessories, refer to the relevant installation instructions.

3.1.1 Required tools

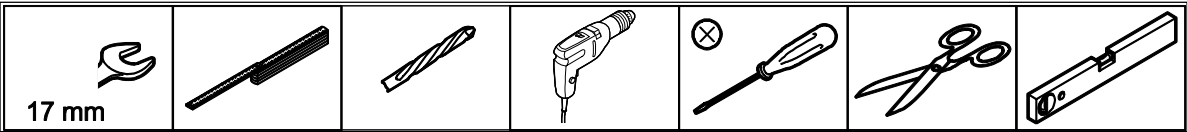
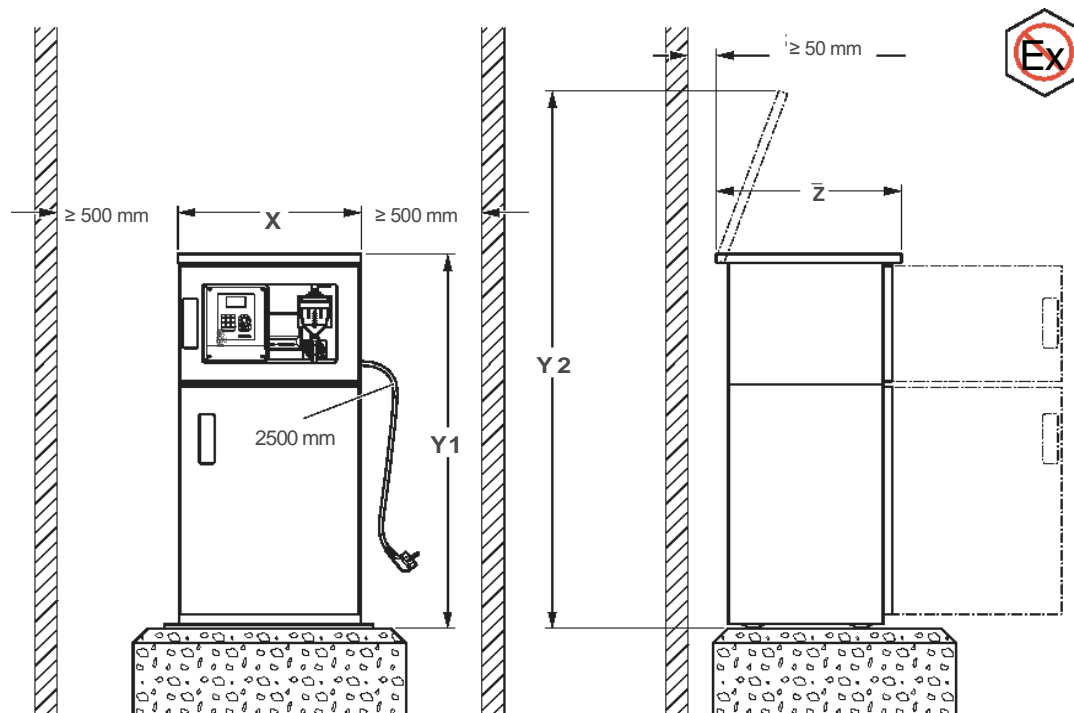

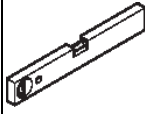


Figure 4 Required tools

Installation

3.1.2 Select place of installation



		X mm	Y 1 mm	Y 2 mm	Z mm
 	SP5 B	760	1100	1640	725
	SP5 S	605	1325	1895	645
	SP5 S-M	605	1475	2030	645
	SP5 S-F	605	1325	1895	645
	SP5 S-F (23 Bottles)	715	1415	2120	810
	SP5 S-A (2–12 Bottles)	605	1325	1895	645
	SP5 S-A (24 Bottles)	715	1415	2120	810
	SP5 S-MS	1200	1690	2260	645

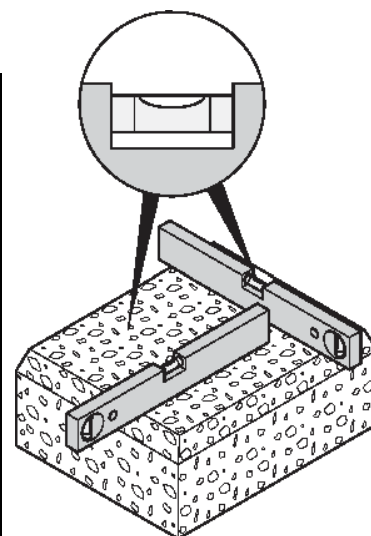
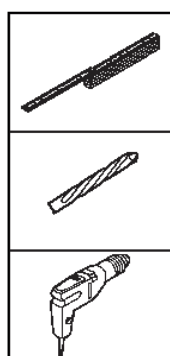


Figure 5 Select place of installation



	A mm	B mm
SP5 B	730	384
SP5 S	660	383
SP5 S-M	660	383
SP5 S-F	660	383
SP5 S-F (23 bottles)	770	500
SP5 S-A (2-12 bottles)	660	383
SP5 S-A (24 bottles)	770	500
SP5 S-MS	1260	383

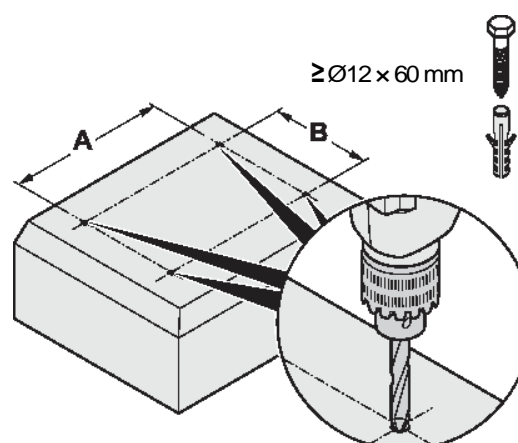


Figure 6 Prepare place of installation

3.1.3 Unpacking

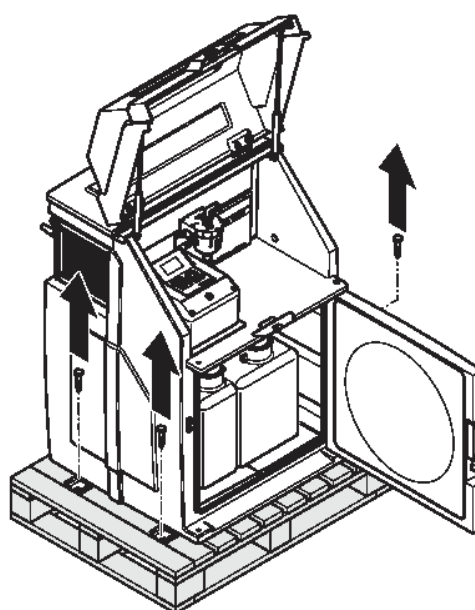
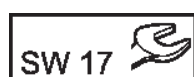


Figure 7 Move the equipment from the transport pallet (SP5 B)

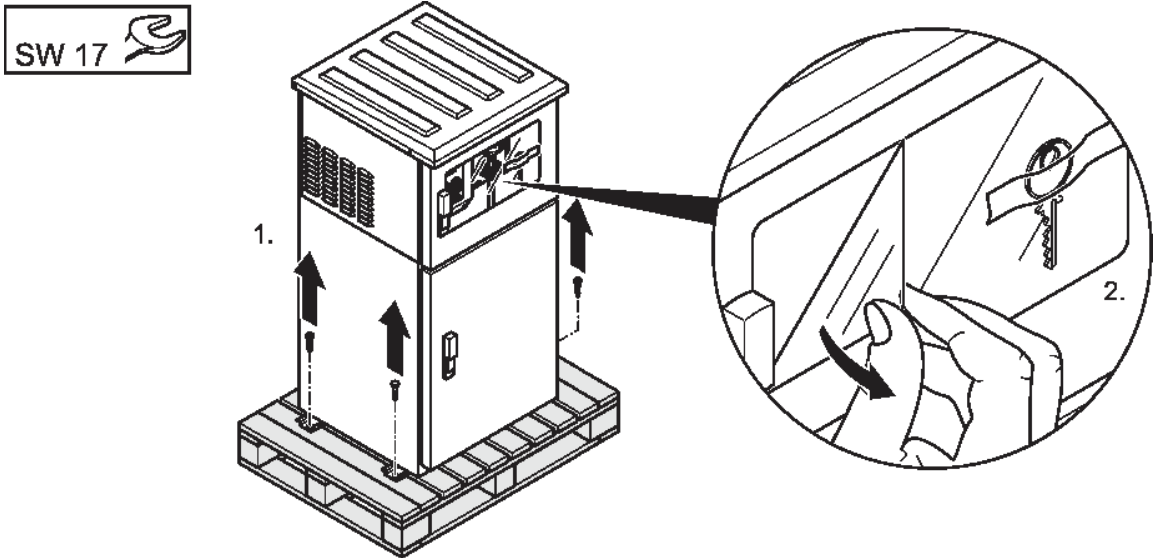
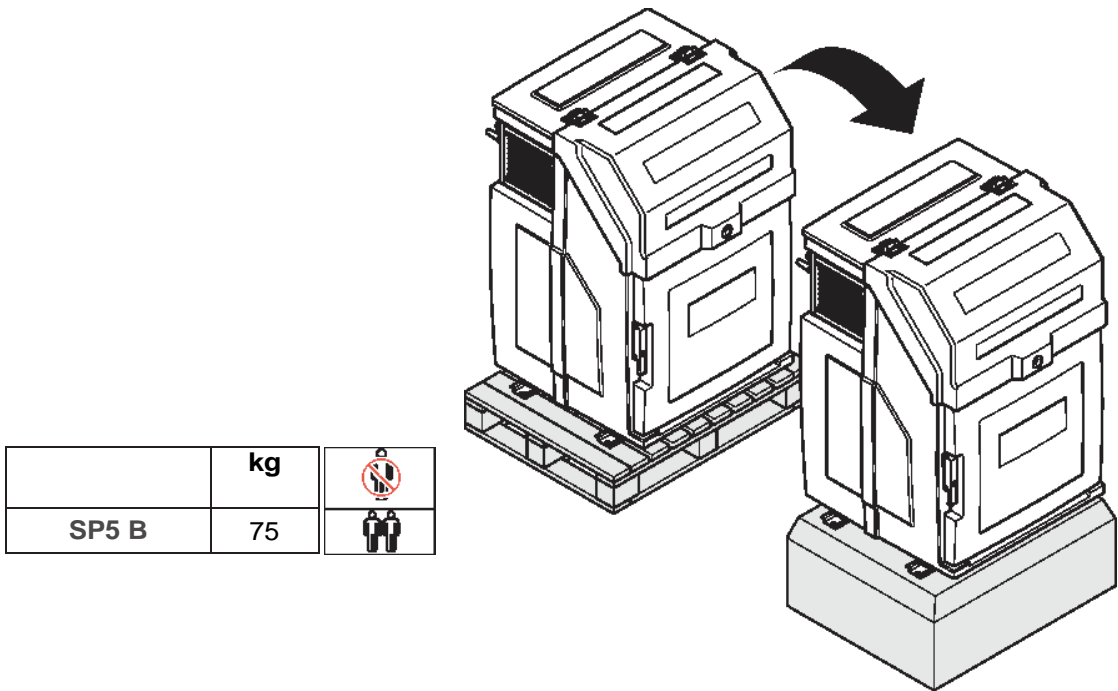


Figure 8 Move the equipment from the transport pallet (SP5 S-SP5 S-MS)

3.1.4 Setup



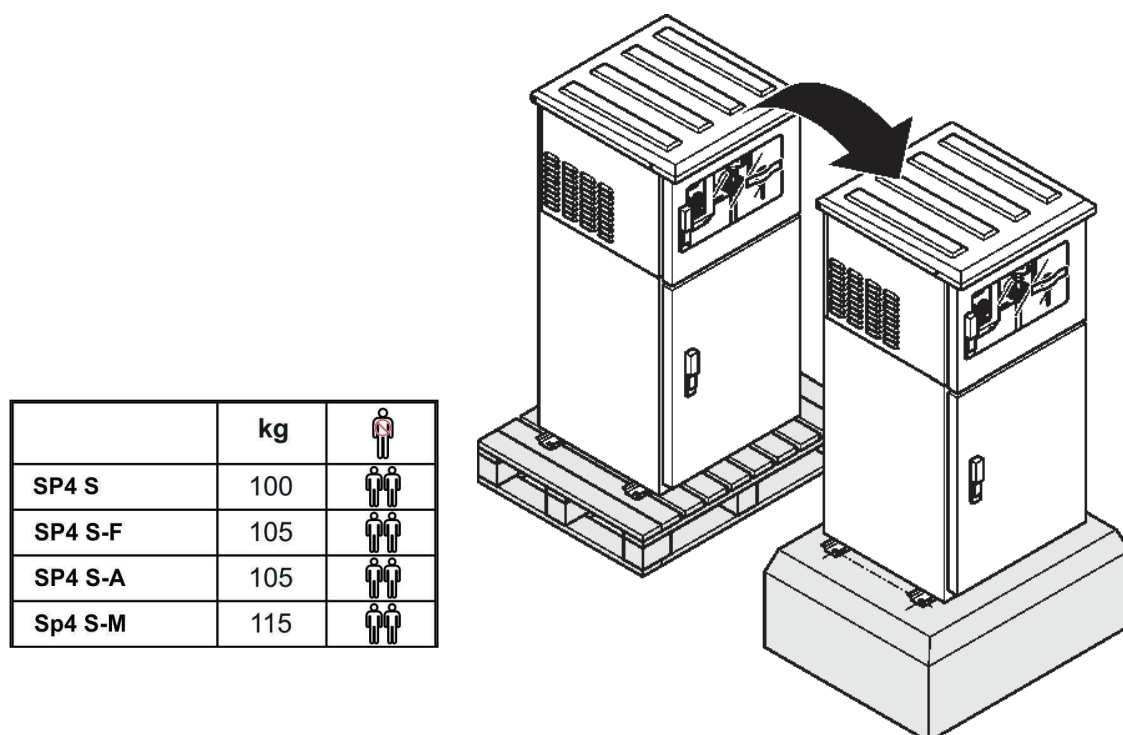


Figure 10 Set up the equipment (SP5 Sxx)

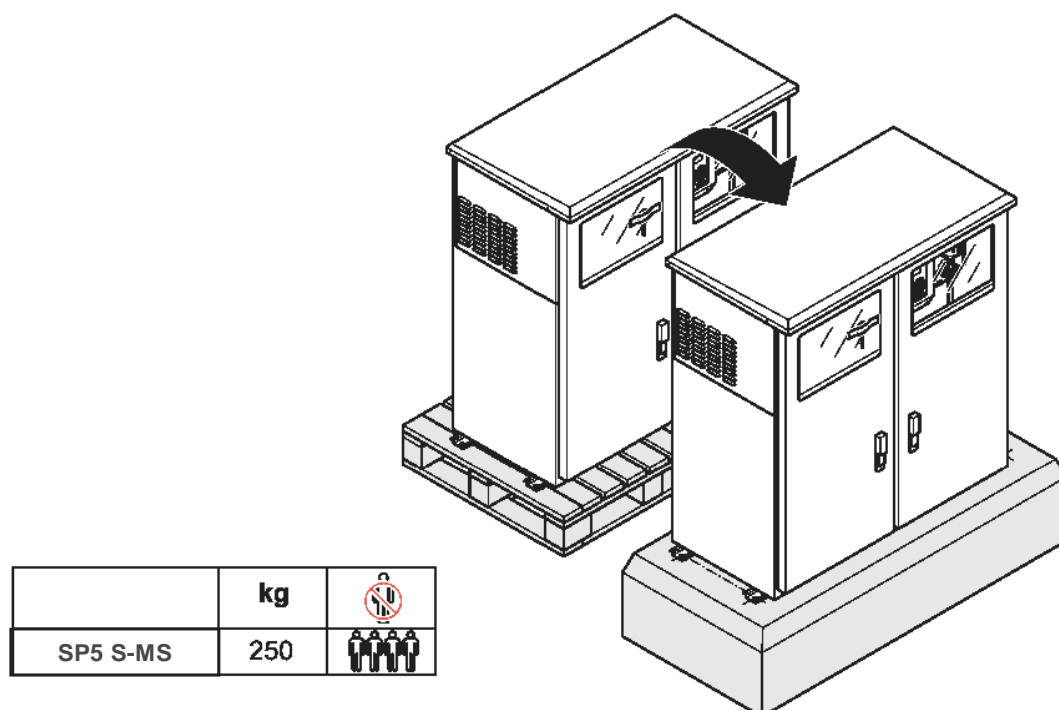


Figure 11 Set up the equipment (SP5 S-MS)

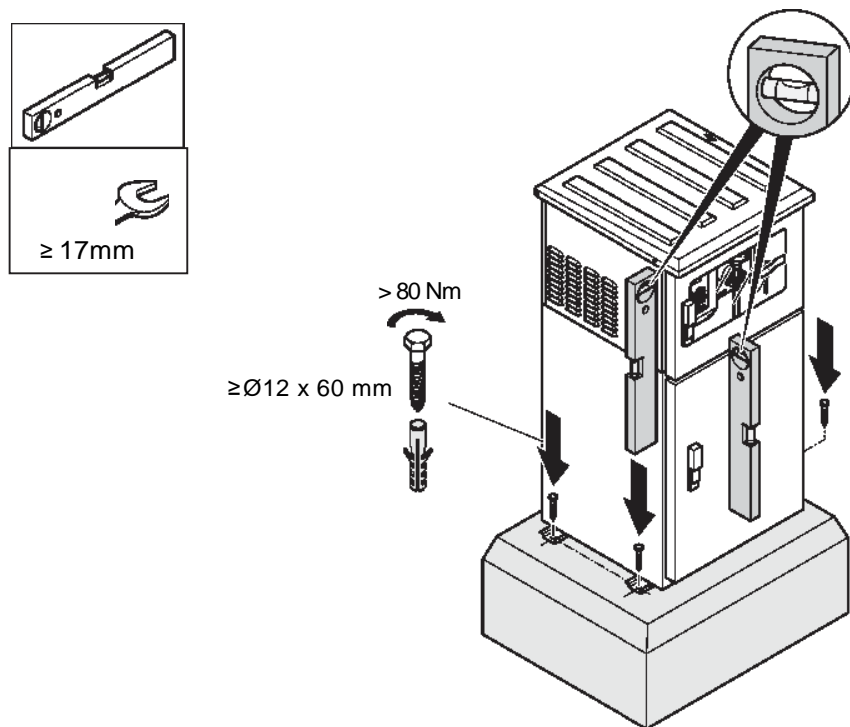


Figure 12 Align and secure the equipment

3.2 Electrical connections



DANGER

Only qualified experts should conduct the tasks described in this section.



DANGER

Do not connect the electrical supply to the mains if the equipment has not been wired and fused correctly.

Sufficiently protect the electrical power supply against short circuits.

For the external power supply, always connect a residual-current circuit breaker (trip current max.: 30 mA) between the mains and the system.

If the equipment is to be installed outdoors, place an overload protection between mains and system.

If the mains plug of the power supply cable is removed, a suitable double-pole one-way switch must be installed immediately next to the display unit with clear labeling for the power supply.

Products intended by the manufacturer for outdoor use offer a higher level of protection against the penetration of liquids and dust. If these products are connected to a mains socket with a cable and plug rather than a permanently

Products intended by the manufacturer for outdoor use offer a higher level of protection against the penetration of liquids and dust. If these products are connected to a mains socket with a cable and plug-rather than a permanently connected cable, the plug and socket are much more susceptible to liquid and dust penetration. The operator must sufficiently protect the plug and outlet against liquid and dust penetration in accordance with local safety regulations. If the instrument is to be used outdoors, it must be connected to a suitable outlet with a protection type of at least IP44 (splash protection).

3.2.1 Electrical installation

3.2.1.1 Prepare the electrical installation (SP5 B)

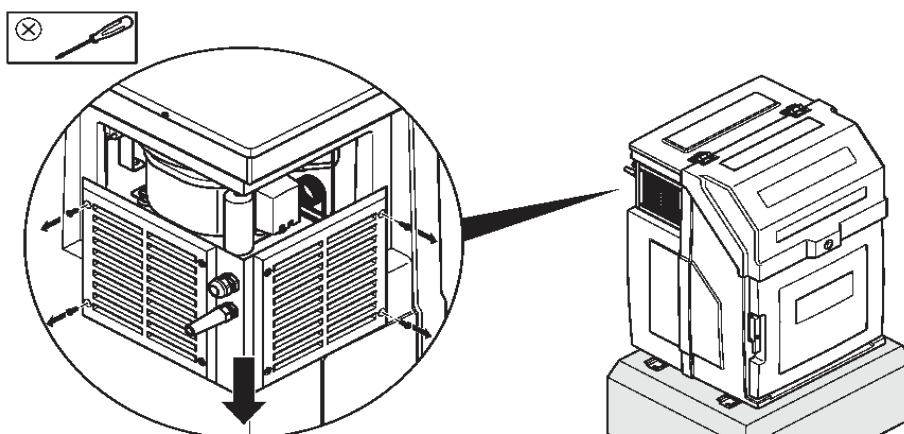


Figure 13 Loosen the screws and remove the cover (SB4 B)

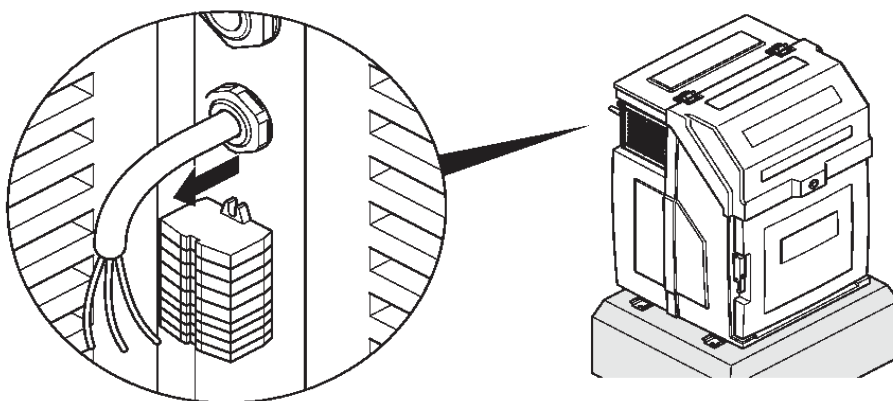


Figure 14 Feed cable through (SB4 B)

3.2.1.2 Prepare electrical installation (SP5 S-SP5 S-MS)

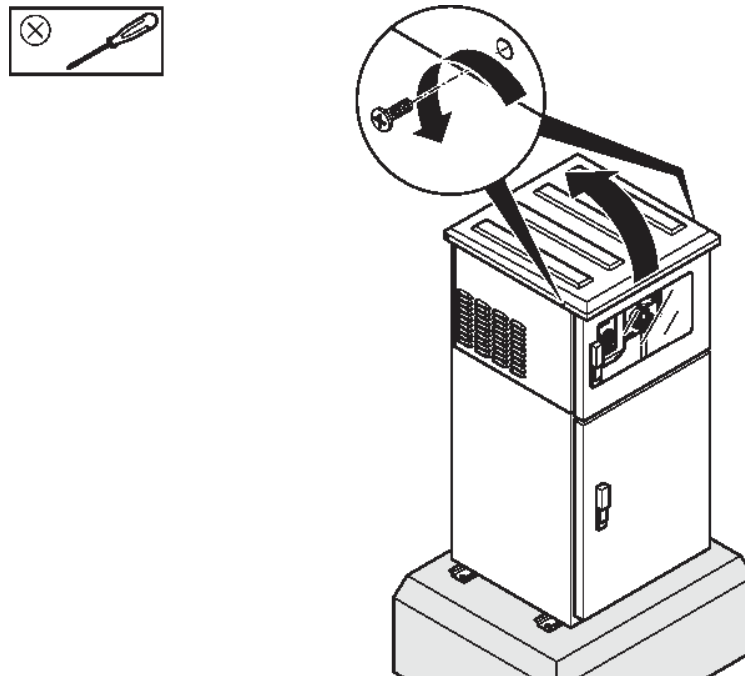


Figure 15 Loosen the lid screws and open the lid (SP5 S-SP5 S-MS)

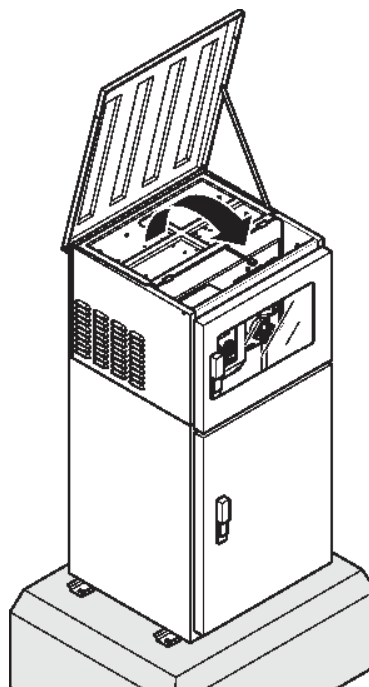


Figure 16 Lift up the cover (SP5 S-SP5 S-MS)

3.2.1.3 Wiring diagram (SP5 B)

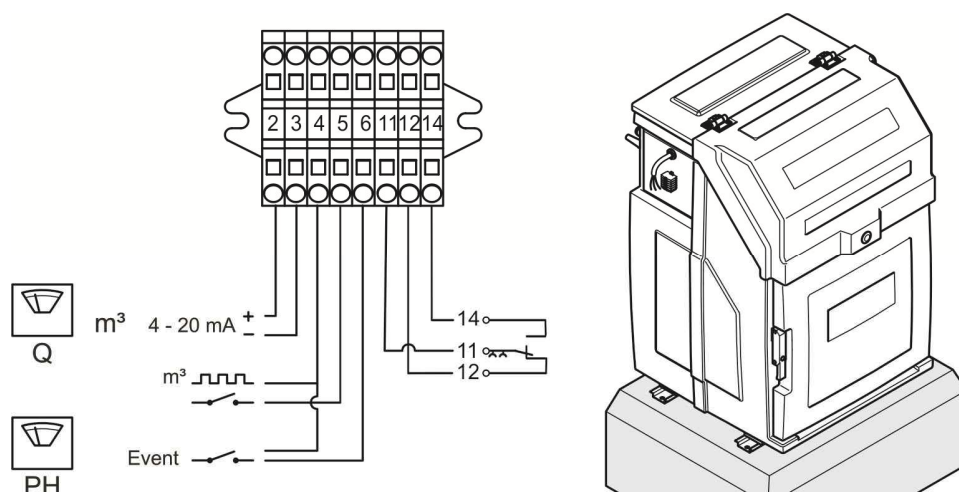


Figure 17 Wiring diagram (SP5 B)

3.2.1.4 Wiring diagram (SP5 S - SP5 S-MS)

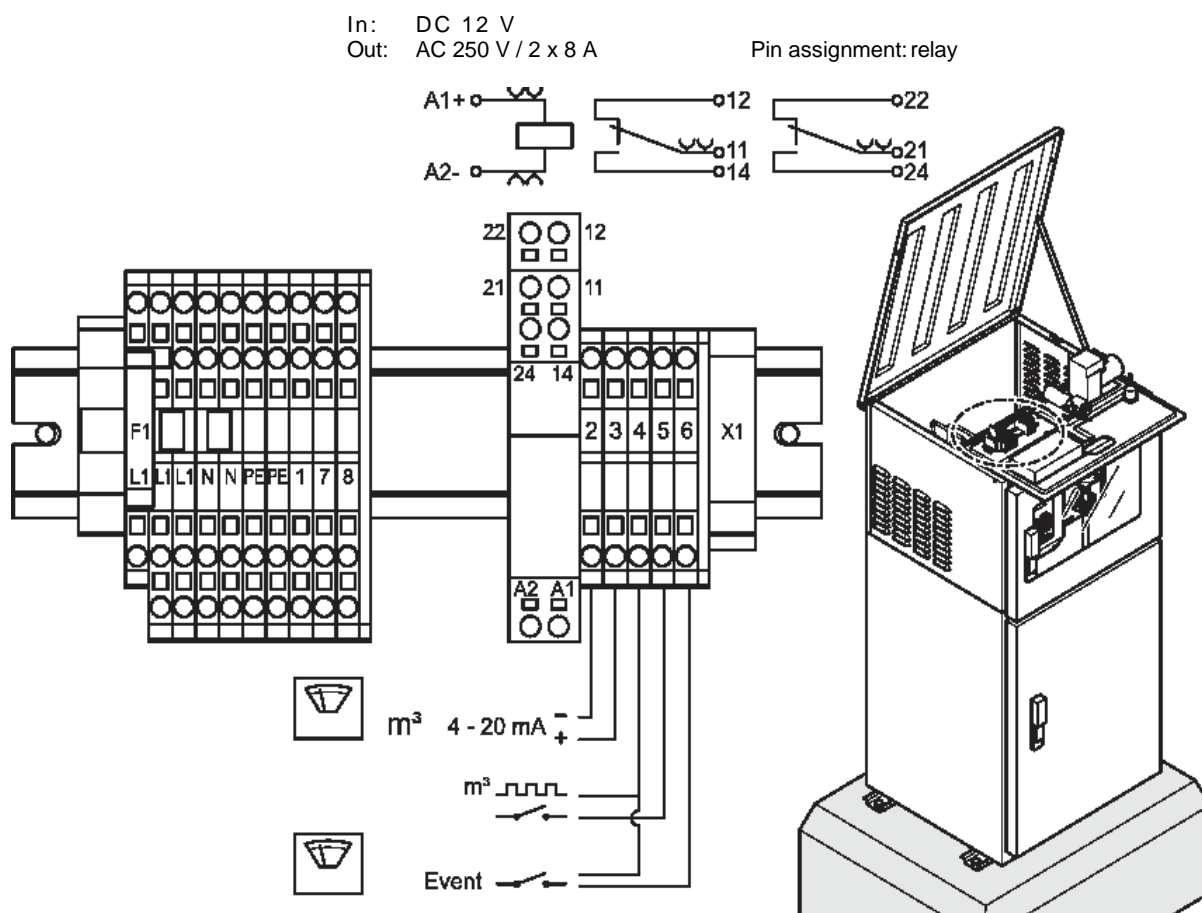


Figure 18 Wiring diagram (SP5 S – SP5 S-MS)

Installation

3.2.1.5 Complete the electrical installation (SP5 B)

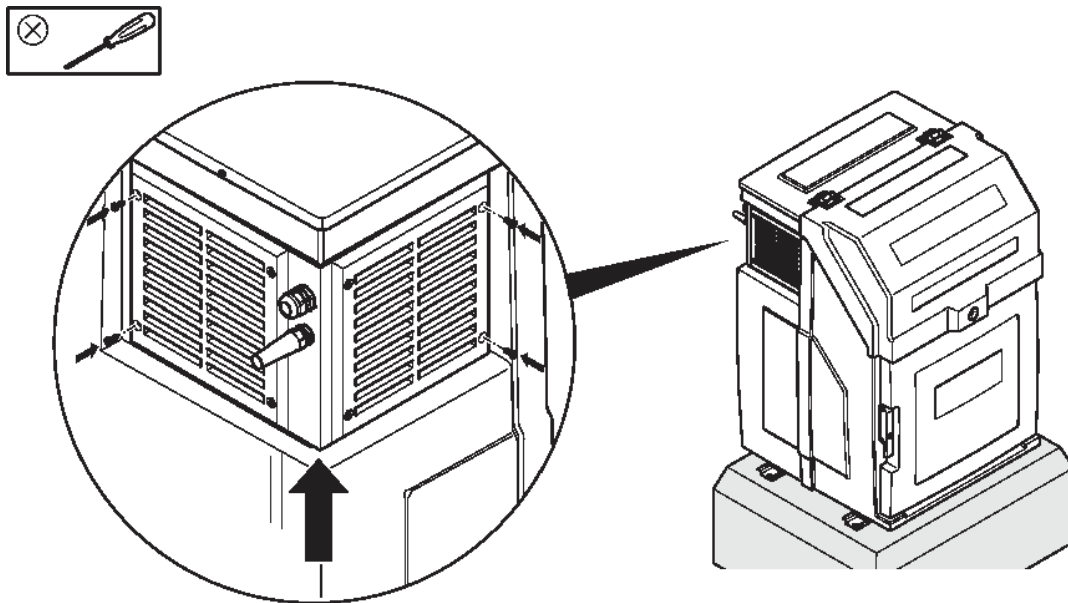


Figure 19 Attach cover

3.2.1.6 Complete the electrical installation (SP5 S-SP5 S-MS)

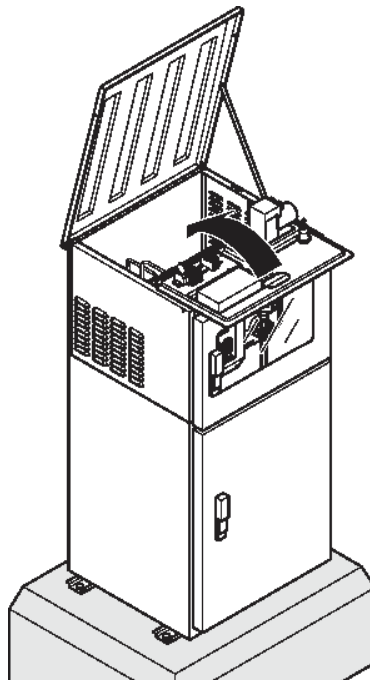


Figure 20 Shut the cover

If the suction hose is not connected immediately, close the housing lid as described in [figure 24, page 22](#) and [figure 25, page 23](#).

3.3 Commissioning of the device

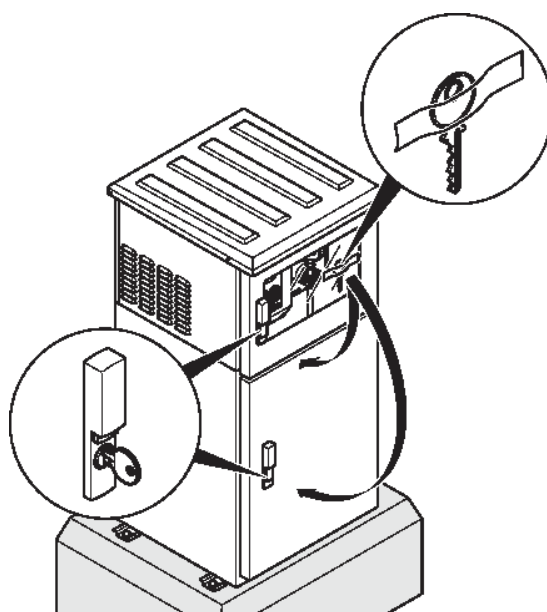


Figure 21 Key storage location

3.3.1 Hose connection

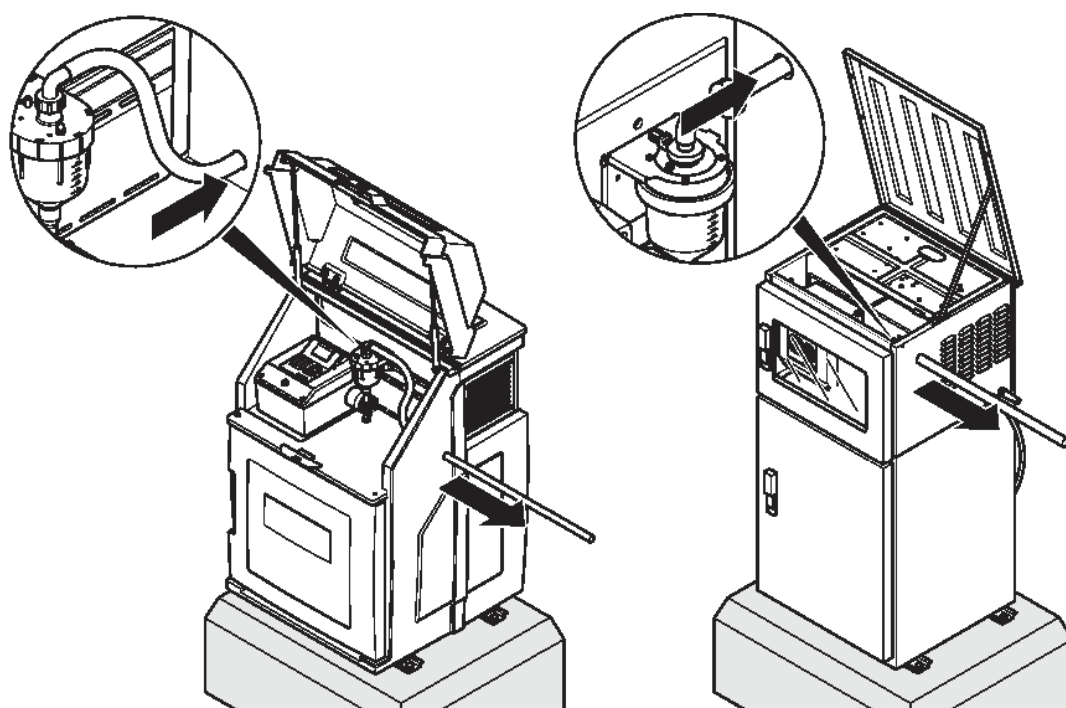


Figure 22 Feed the suction hose through housing opening

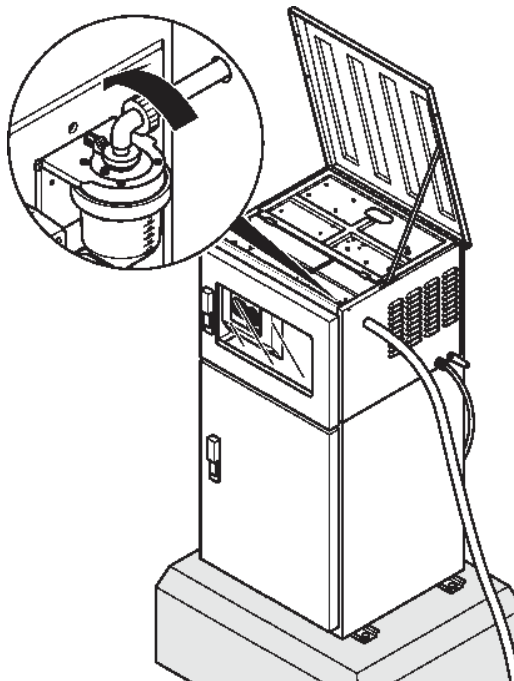


Figure 23 Screw in the union nut

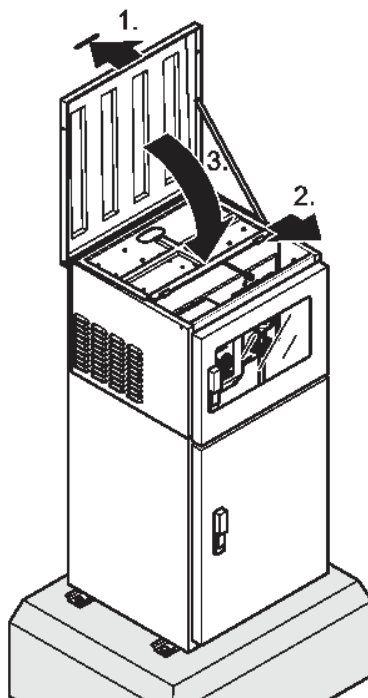


Figure 24 Close the lid

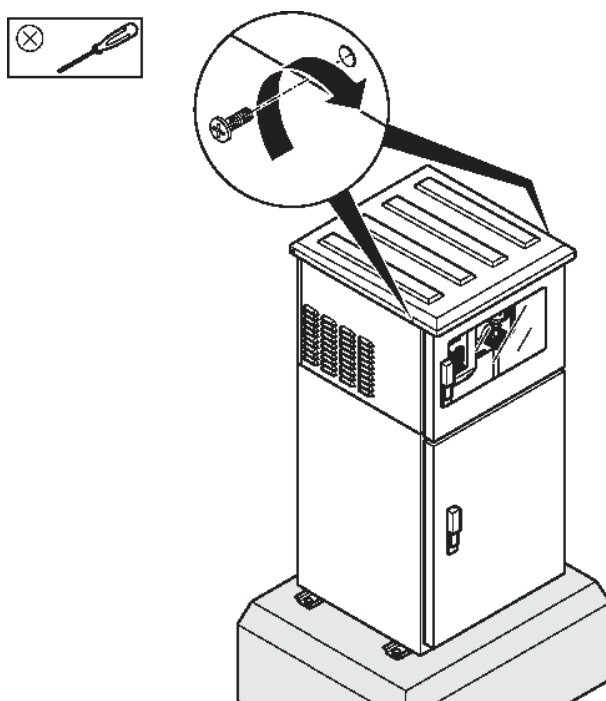


Figure 25 Screw down the lid tightly

Position the hoses in accordance with the following installation diagram.

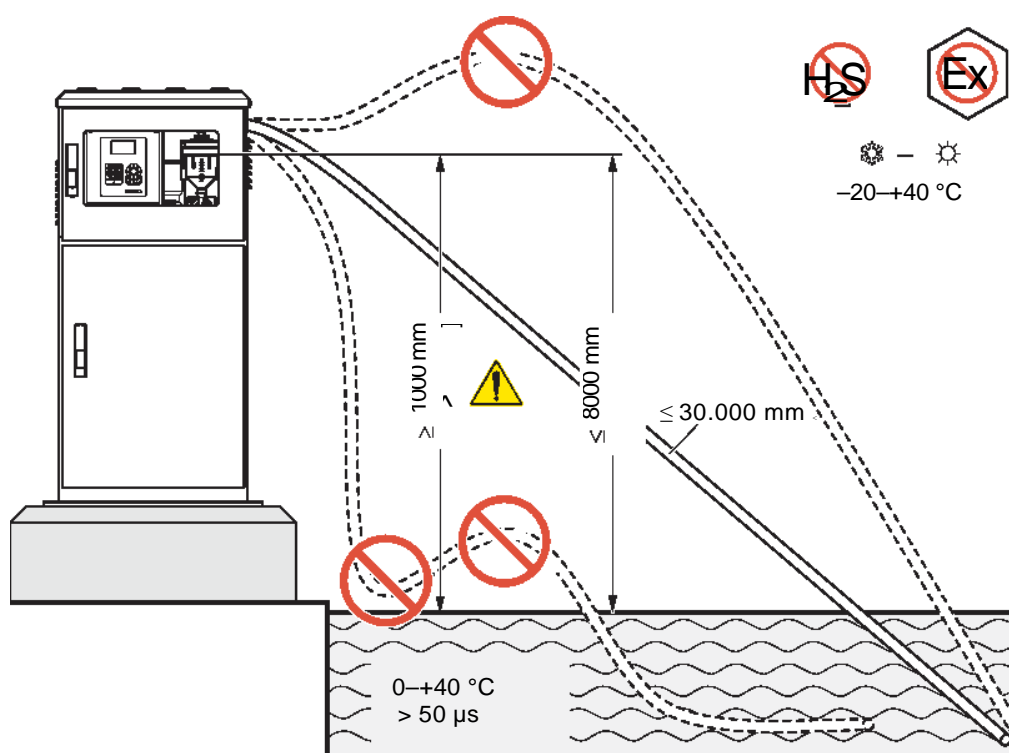


Figure 26 Installation diagram

3.3.2 Set the individual sample volume

3.3.2.1 Plastic dosing vessel

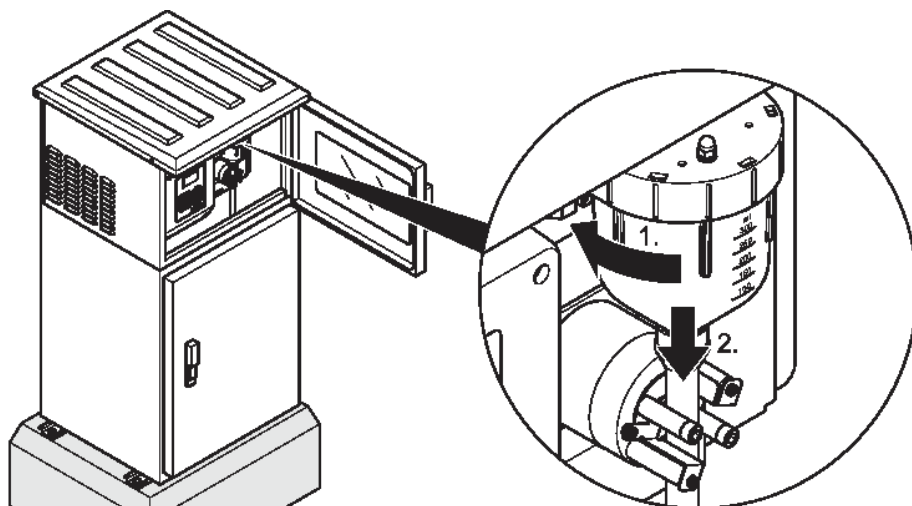


Figure 27 Release the plastic dosing vessel

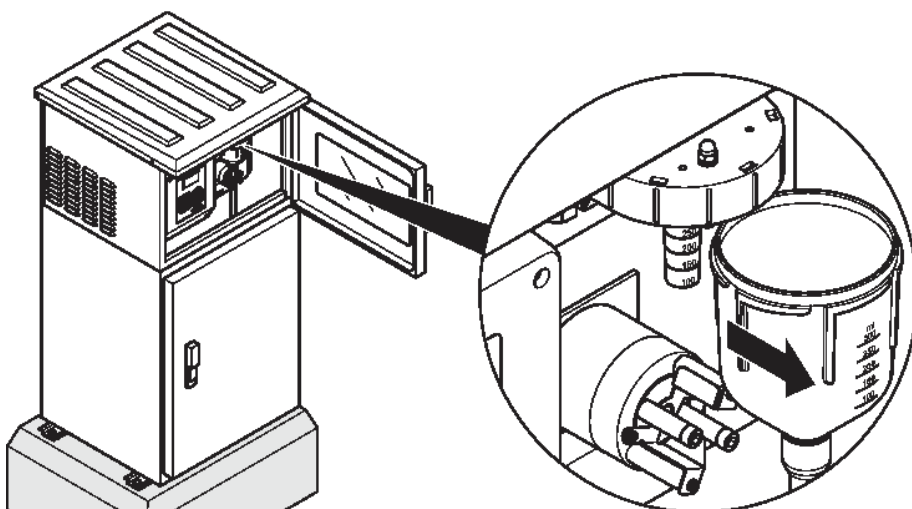


Figure 28 Remove the plastic dosing vessel

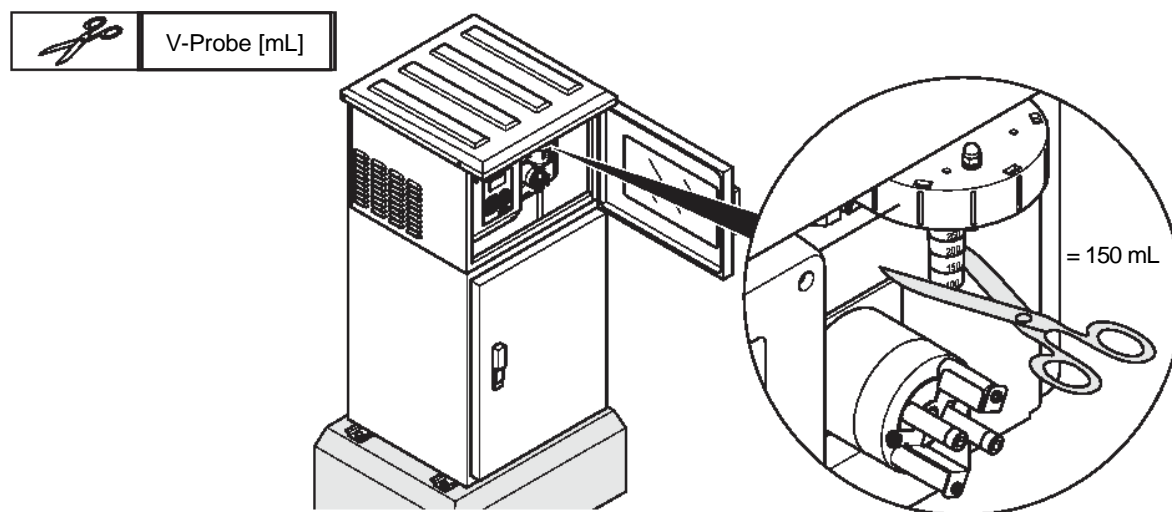


Figure 29 Cut the dosing tube to set the sample volume

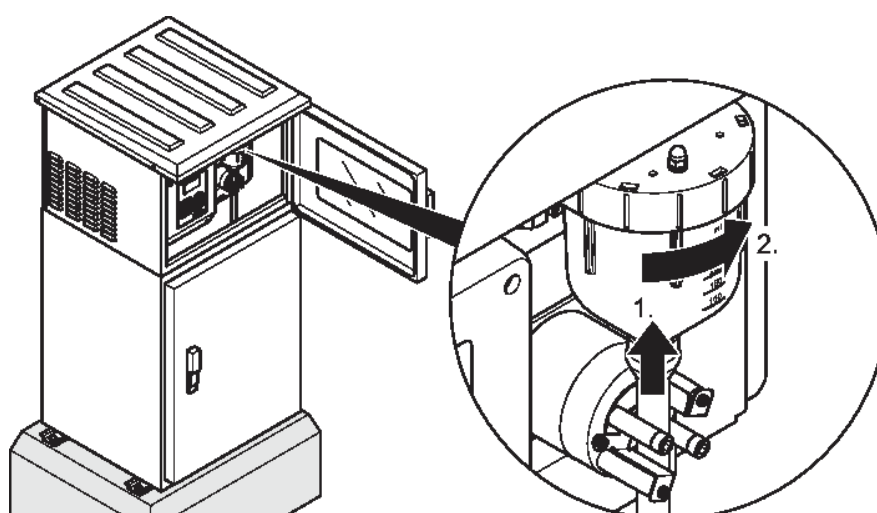


Figure 30 Reinstall the plastic dosing vessel

Installation

3.3.2.2. Glass dosing vessel

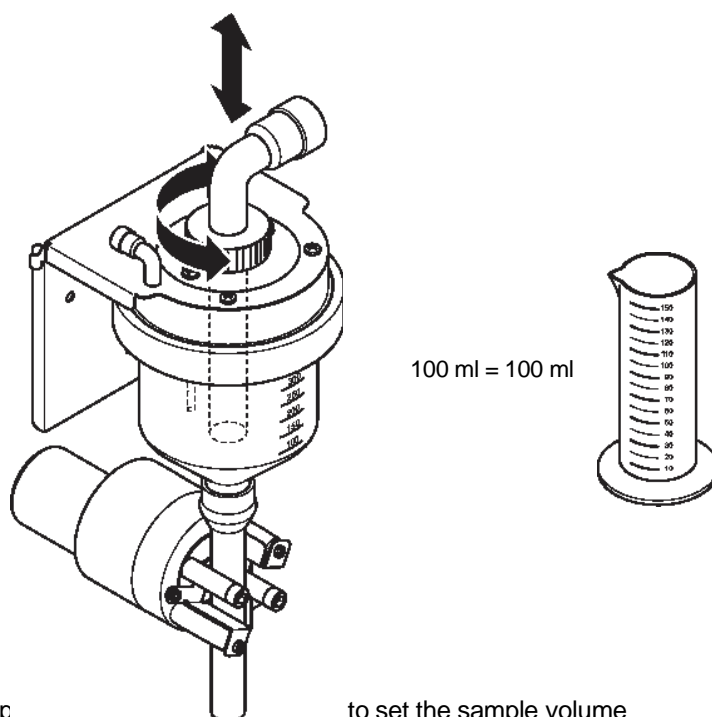


Figure 31 Disp

to set the sample volume

3.3.2.3 Dosing vessel for flow-proportional sampling

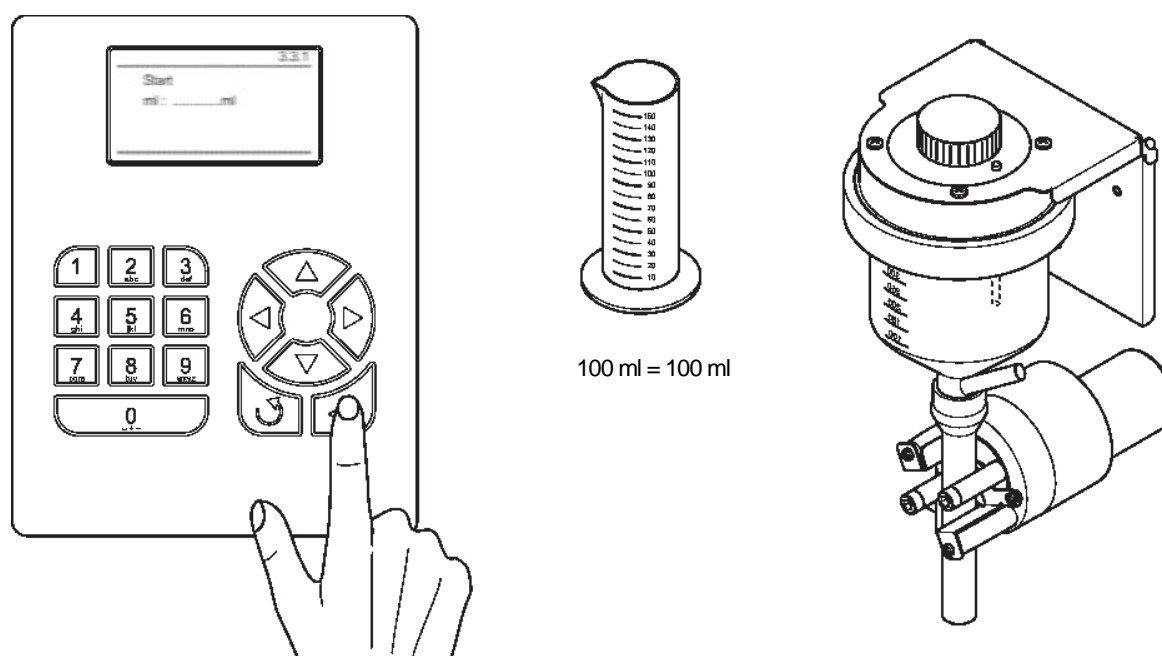


Figure 32 Calibrate the flow-proportional dosing vessel via the service menu

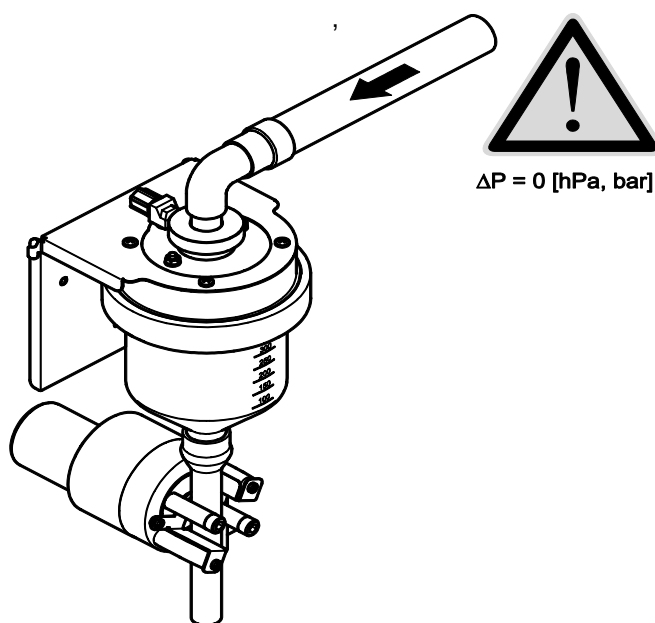


Figure 33 The flow-proportional dosing vessel may only be used if there is NO counter pressure!

3.3.2.4 Bypass dosing vessel

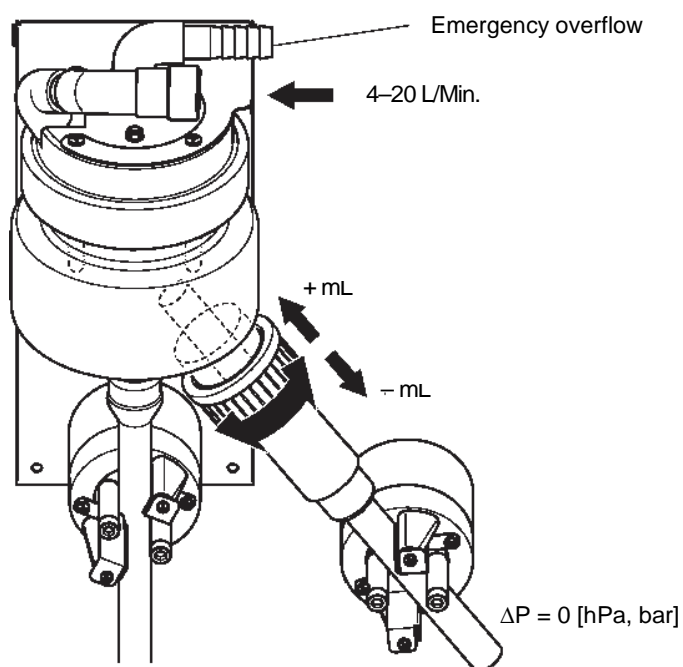


Figure 34 Set the sample volume of the bypass dosing vessel

3.3.2.5 Rinsing water connection and drain (SP5 S-F/SP5 S-A)

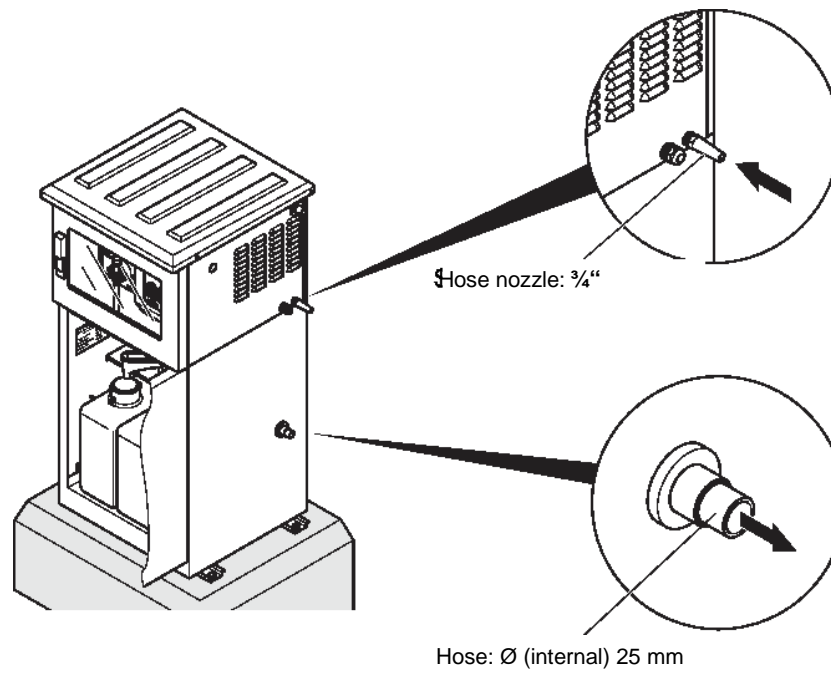


Figure 35 Rinsing water connection and drain (SP5 S-F)

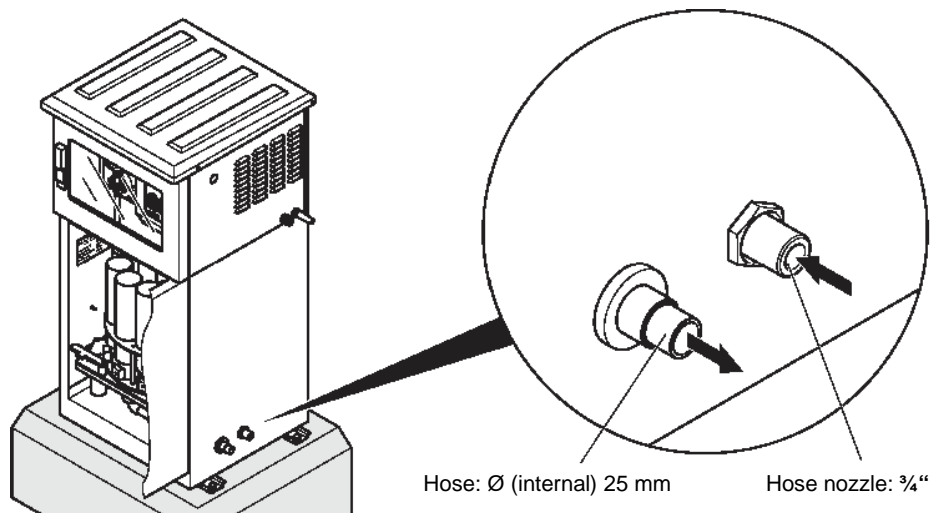


Figure 36 Rinsing water connection and drain (SP5 S-A)

3.3.2.6 Water circuit diagram (SP5 S-MS)

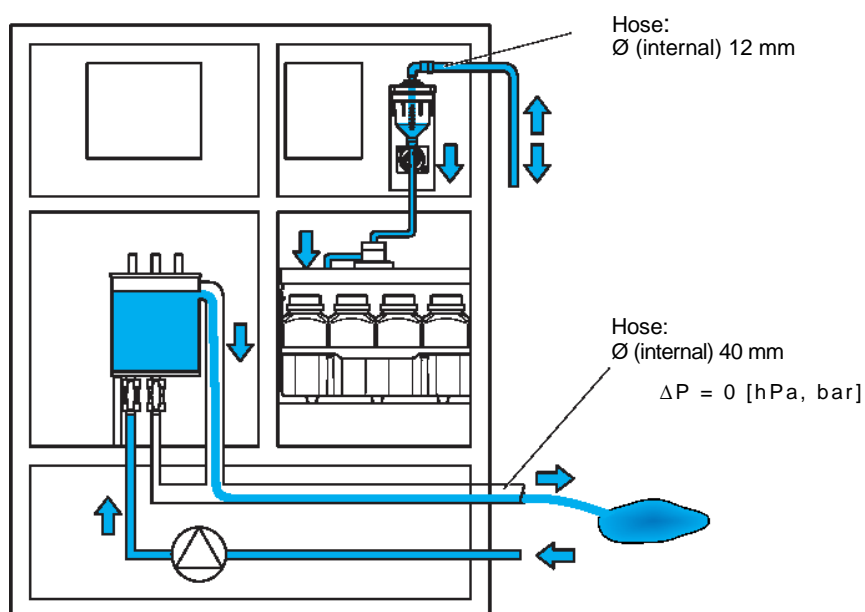


Figure 37 Water circuit diagram (SP5 S-MS)

3.3.3 Preparing sample containers (SP5 B, SP5 S, SP5 S-M, SP5 S-F, SP5 S-MS)

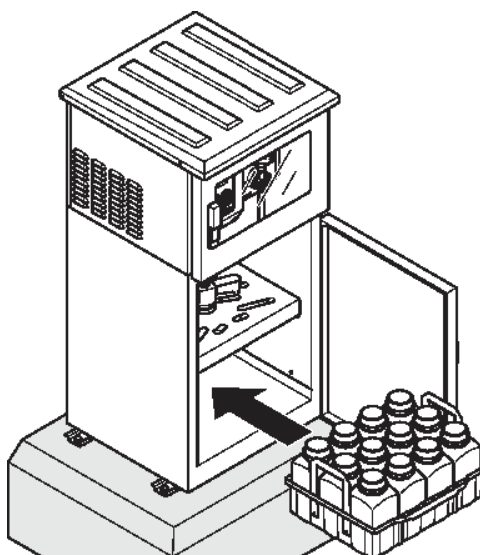


Figure 38 Put the empty bottles in the housing

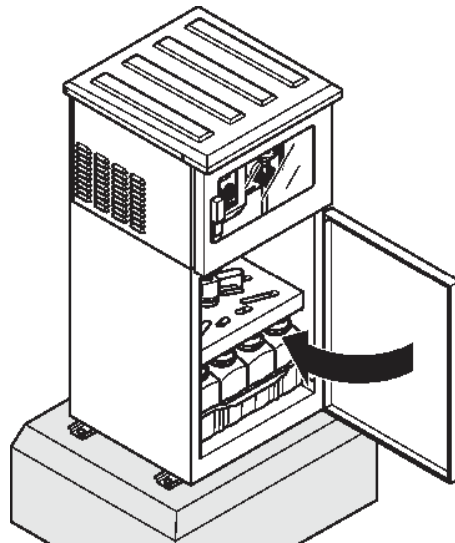


Figure 39 Close the door

3.3.4 Connect the equipment to the mains

Make sure that:

- the equipment has been fully prepared for commissioning
- the values on the rating label correspond with those of the mains supply
- the correct plug has been attached or the direct wire has been implemented correctly
- the equipment can be put into operation without any risks.

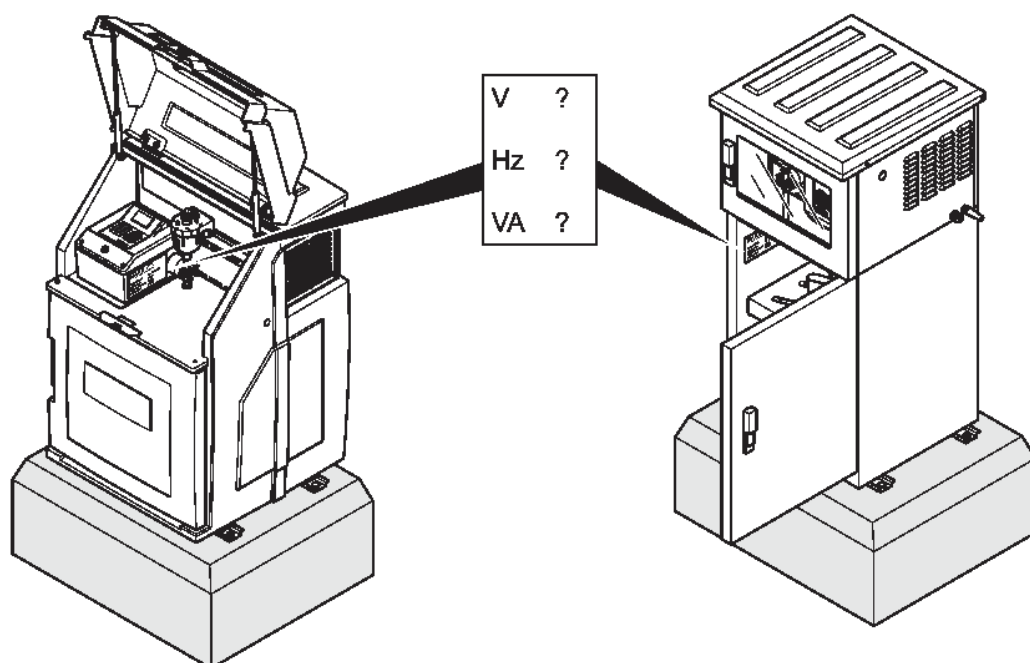


Figure 40 Rating label

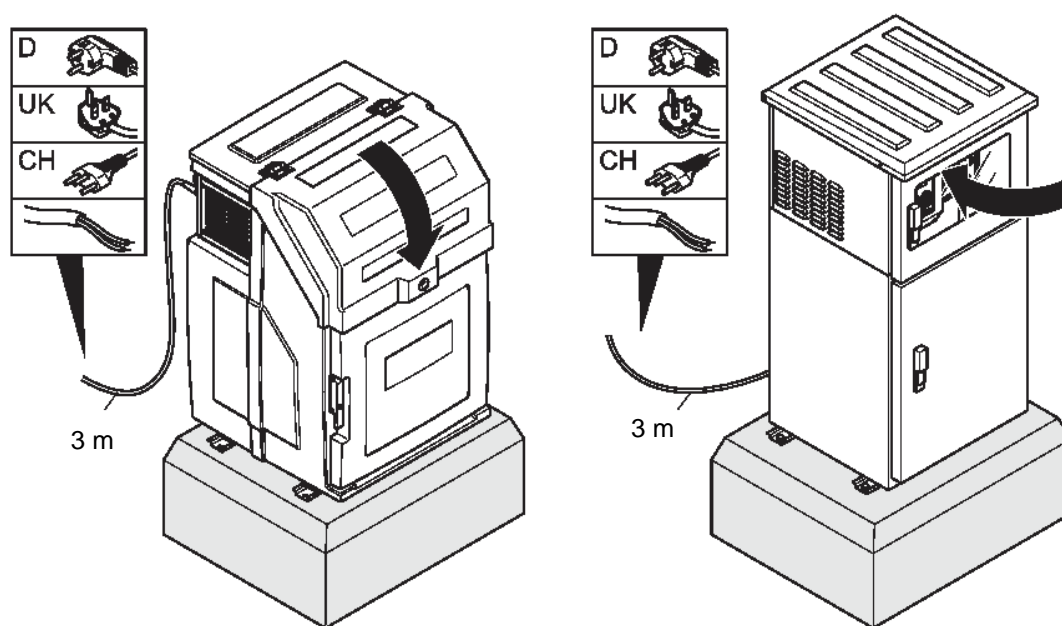


Figure 41 Possible connection configurations

Chapter 4 Operation

4.1 Control unit operation

All the equipment functions are software-controlled.

4.1.1 Programming

The menu structure is similar to the directory structure of a computer hard drive and is divided into main menus and sub menus.

4.1.1.1 Keyboard layout/function

The equipment is programmed by the operator.

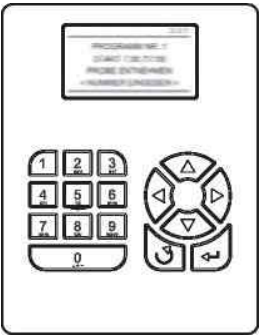


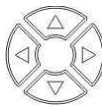



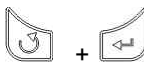


Figure 42 Control panel

The key functions are configured as follows to enable highly intuitive operation:

Table 1 Key functions

Display help text (in the case of selection fields, the cursor must be placed on the left-hand side)	Arrow key	
Move from one menu item to the next menu selection	Arrow keys	
Select the desired menu	Enter key	
Move within a menu	Arrow keys	
Selection within the menu	Arrow keys	
Confirm the selection (automatically marked with a ✓)	Enter key	

Table 1 Key functions (continued)

Enter/change values	Arrow keys	
Confirm the entered values	Enter key	
Return to the next superordinate menu level	Back key	
Enter values	Numeric keypad	
Initialise (Reset) of Display - Press together	Back-key + Enter	
Wakeup sleepmode (press 5 sec. at least)	Back- key	
Restore factory settings (Display = „load factorysettings“) Hold Back-key until boot process is finished	Back- key	

Example: A setting needs to be changed.

1. Press Enter.

The cursor flashes.

2. Use the arrow keys to move the cursor on the desired position.

3. Press the Enter key.

The selection is now confirmed and the program can be started.

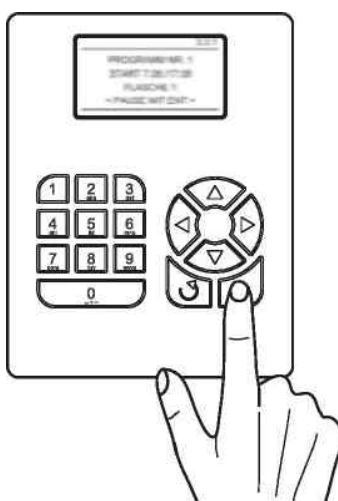


Figure 43 Start the program

Operation

Depending on the program section

- an activity is started or
- the next menu item is automatically selected.

Remark: General rule:

If you press the Back key

- the action is cancelled or
- the navigation takes one step back in the menu.

4.2 Normal operation

The described normal operation applies to several models

(e. g. SP5 B, SP5 S, SP5 S-M, SP5 S-F, SP5 S-A).

The SP5 B, SP5 S and SP5 S-A models are displayed as examples in the figures.

4.2.1 Replace the sample bottles (SP5 B, SP5 S, SP5 S-M, SP5 S-F)

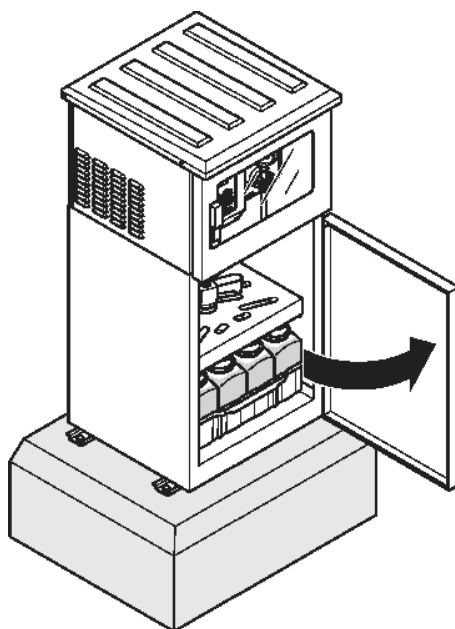


Figure 44 Open the door

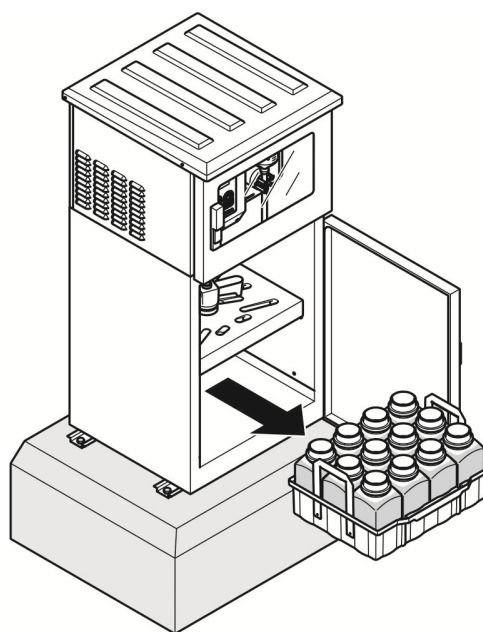


Figure 45 Remove full bottles

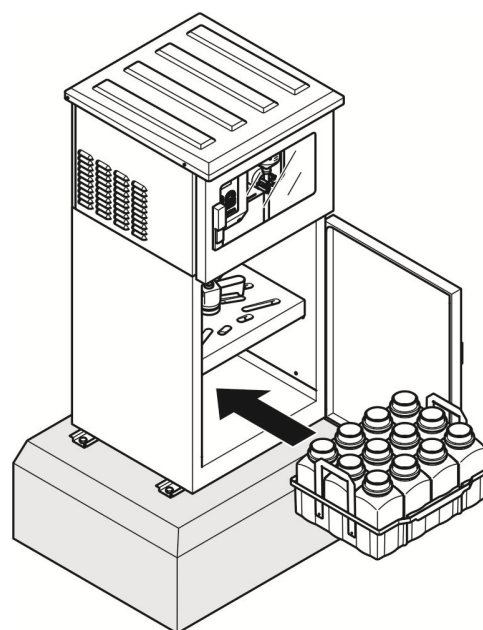


Figure 46 Replace with empty bottles

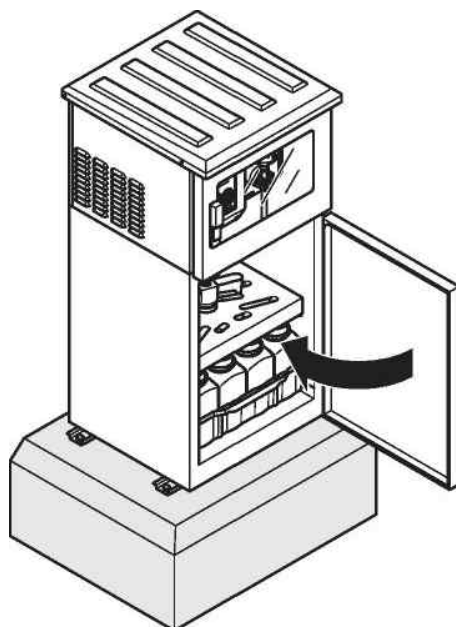


Figure 47 Close the door

4.2.2 Sampling (SP5 S-A with 12 or 24 bottles)

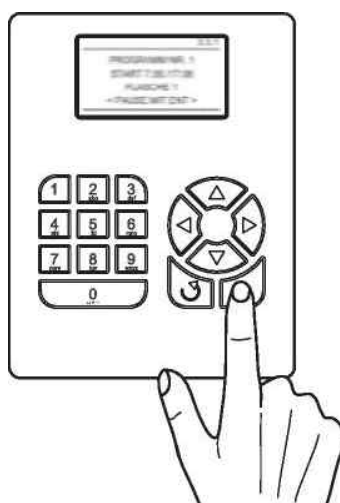


Figure 48 Press PAUSE to interrupt the running program (SP5 S-A with 12 or 24 bottles)

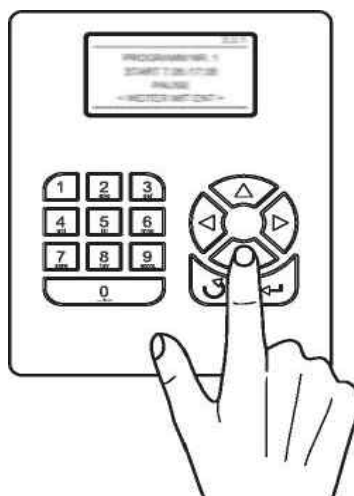


Figure 49 Select „Remove the sample“ (SP5 S-A with 12 or 24 bottles)

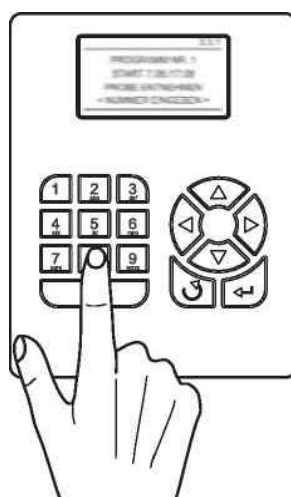


Figure 50 Select bottle number (SP5 S-A with 12 or 24 bottles)

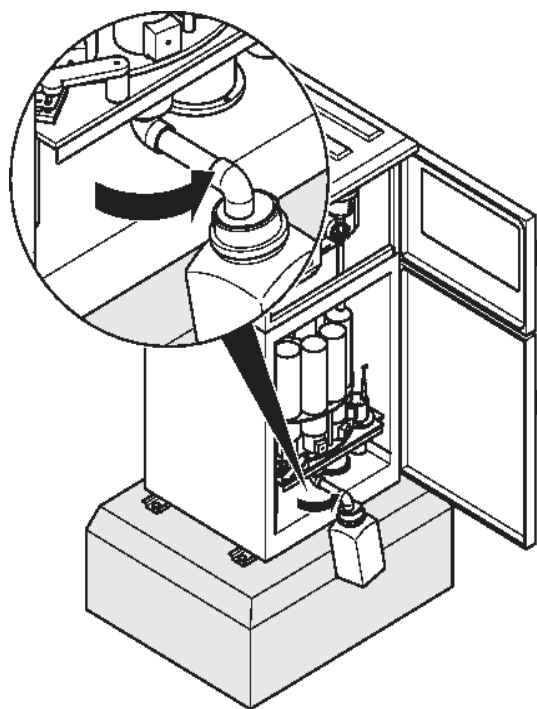


Figure 51 Swivel out the sample faucet (SP5 S-A with 12 or 24 bottles)

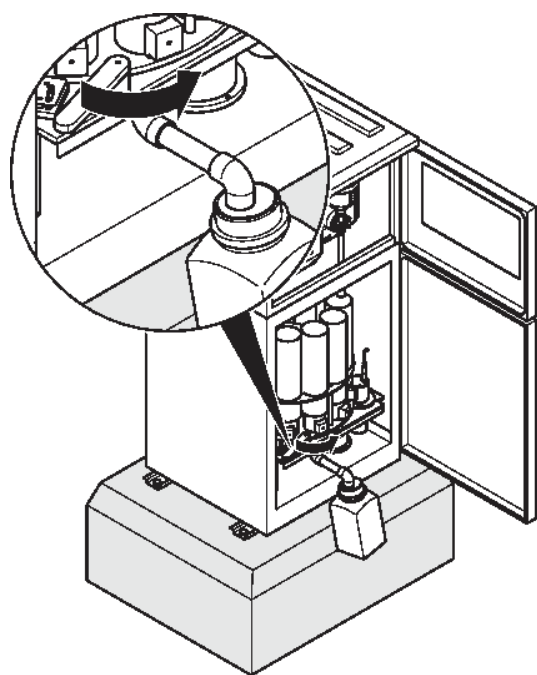


Figure 52 Press the lever to open the sample faucet
(SP5 S-A with 12 or 24 bottles)

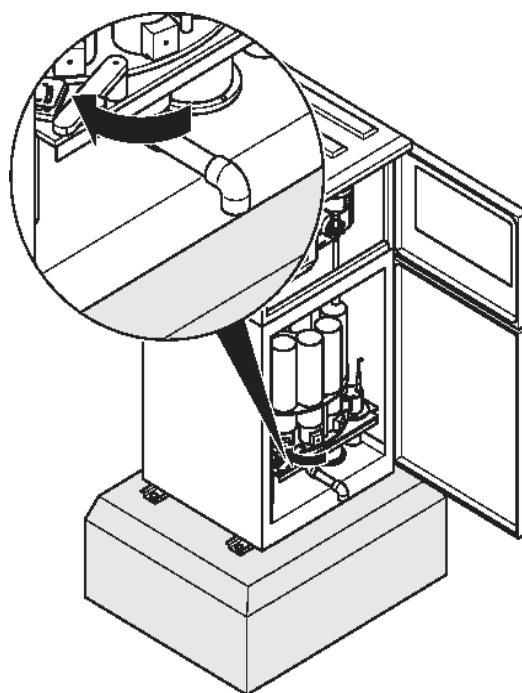


Figure 53 Swivel the lever back to close the sample faucet (SP5 S-A with 12 or 24 bottles)

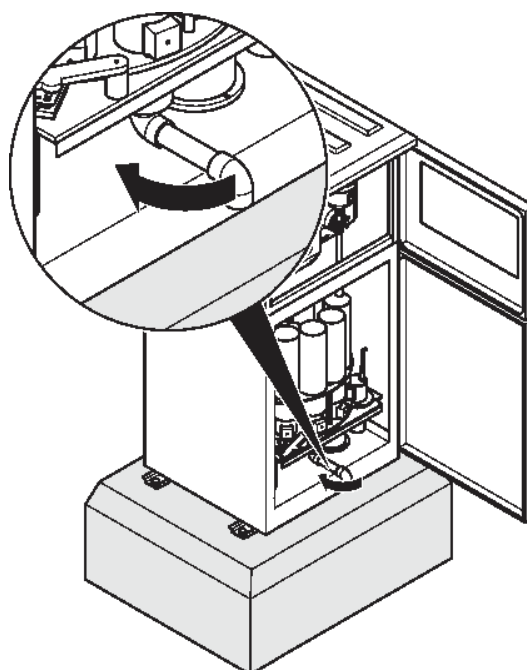


Figure 54 Swivel in the sample faucet (SP5 S-A with 12 or 24 bottles)

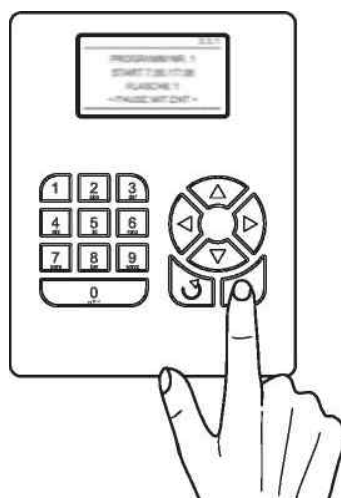


Figure 55 Select “Continue program” (SP5 S-A with 12 or 24 bottles)

4.2.3 Sampling (SP5 S-A with 2 or 4 bottles)

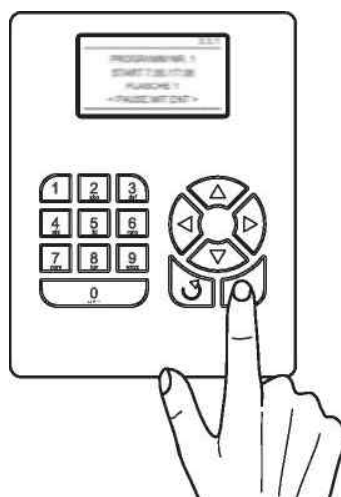


Figure 56 Select “Pause” (SP5 S-A with 2 or 4 bottles)

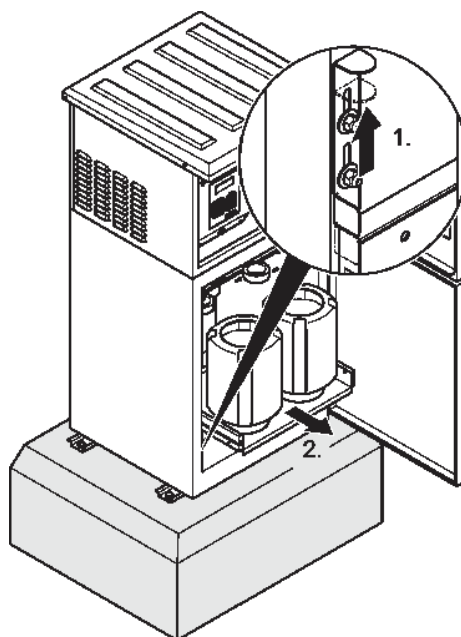


Figure 57 Release the bottle holder (SP5 S-A with 2 or 4 bottles)

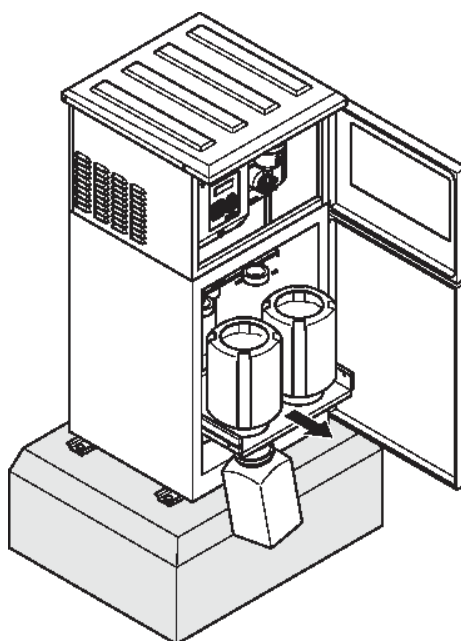


Figure 58 Pull out the bottle holder and take out sample (SP5 S-A with 2 or 4 bottles)



Figure 59 Select "Take out sample" (SP5 S-A with 2 or 4 bottles)

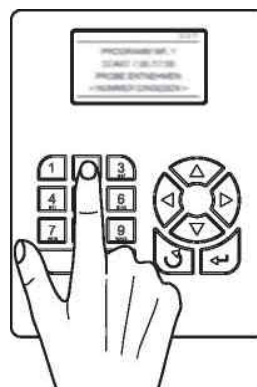


Figure 60 Select the bottle number (SP5 S-A with 2 or 4 bottles)

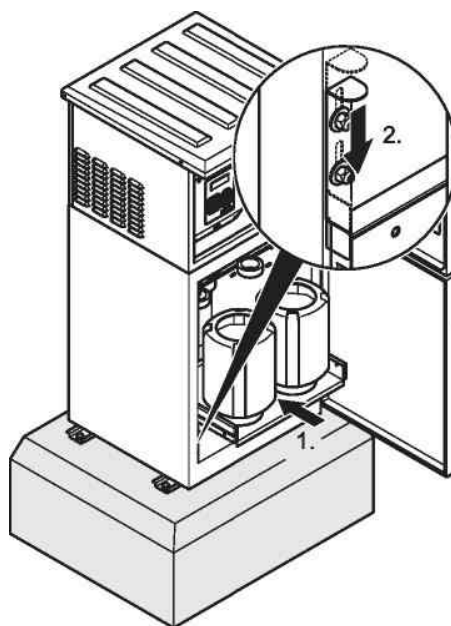


Figure 61 Push the bottle holder back in and secure (SP5 S-A with 2 or 4 bottles)

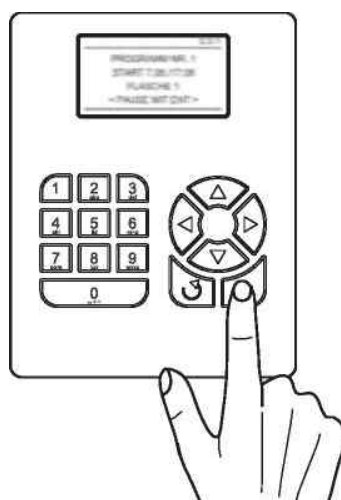


Figure 62 Select "Continue program" (SP5 S-A with 2 or 4 bottles)

Chapter 5 Maintenance and cleaning



DANGER

Only qualified experts should conduct the tasks described in this section.



WARNING

Please observe the following points for the use of chemicals and/or waste water:

Wear protective clothing:

- Laboratory coat
 - Protective eyewear
 - Rubber gloves
-

5.1 Maintenance work

The sampler is maintenance-free. Thus the operator does not need to carry out any maintenance work.

5.2 Cleaning

5.2.1 Clean the housing and distributor



ATTENTION!

**Manual rotation of the distributor can damage the drive.
Never rotate the distributor manually!**

Clean the interior and exterior of the housing with a damp, lint-free cloth. Add commercial household cleaner to the cleaning water as required.

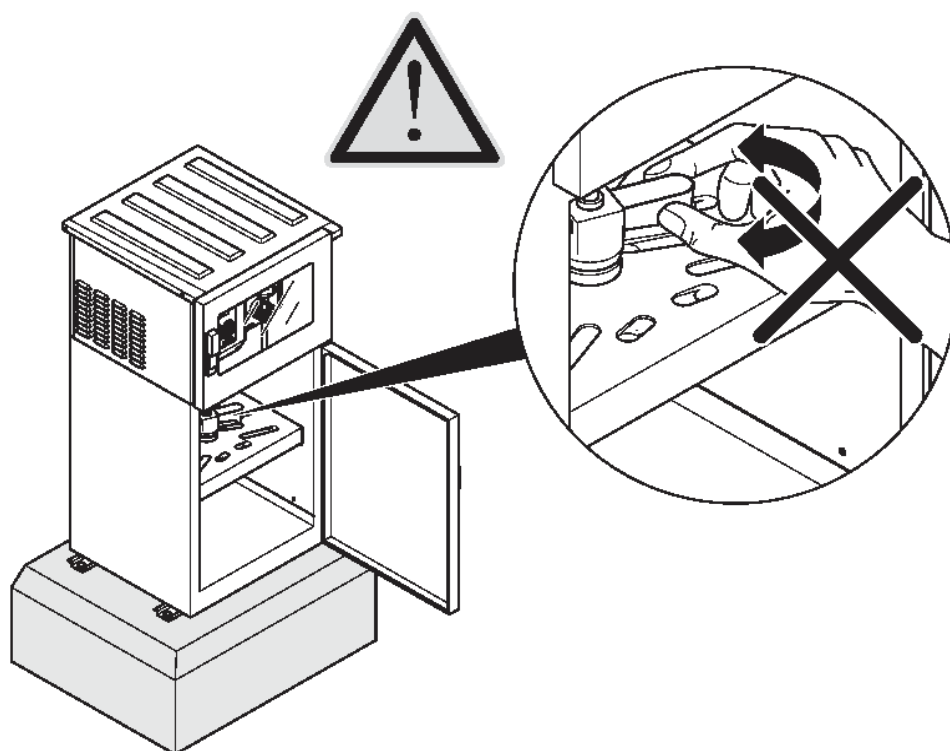


Figure 63 NEVER rotate the distributor unit manually

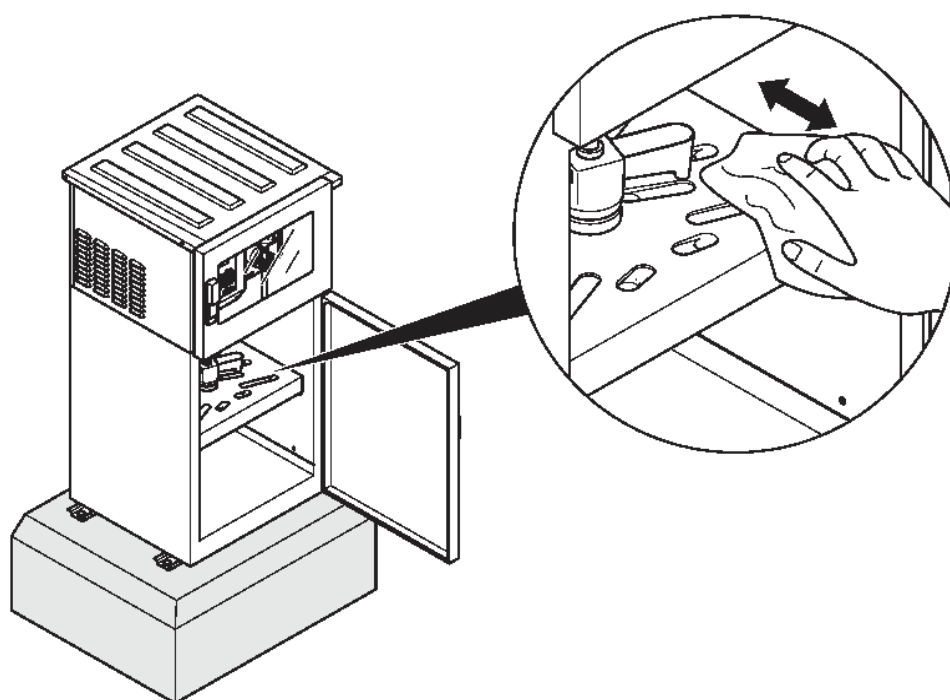


Figure 64 Clean the distributor unit

5.2.2 Clean the dosing vessel

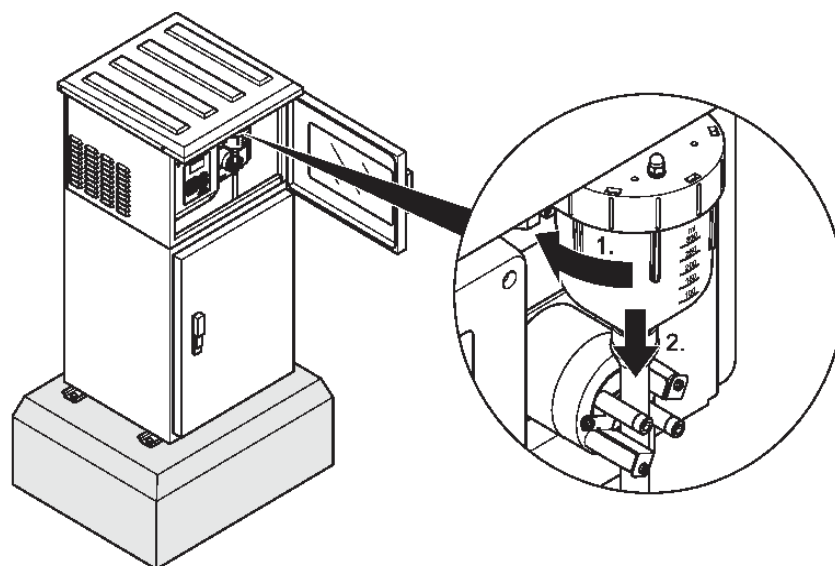


Figure 65 Release the dosing vessel

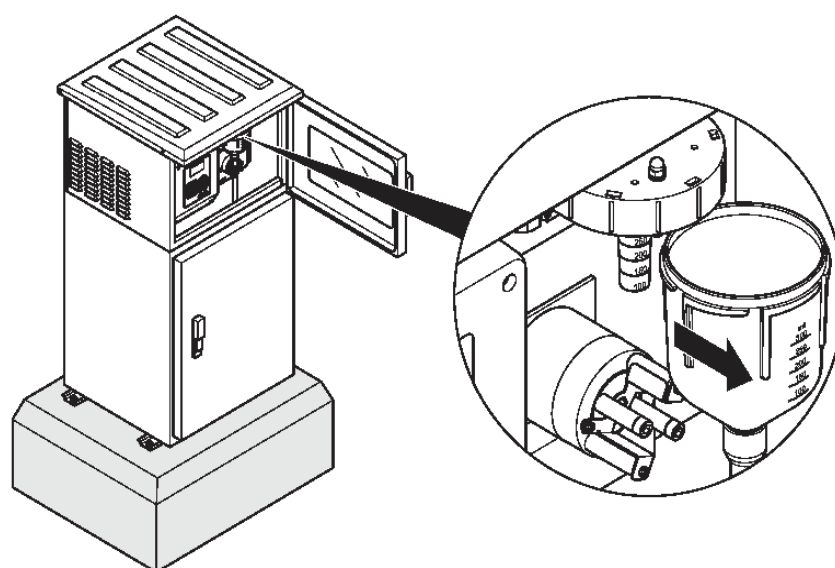


Figure 66 Remove the dosing vessel

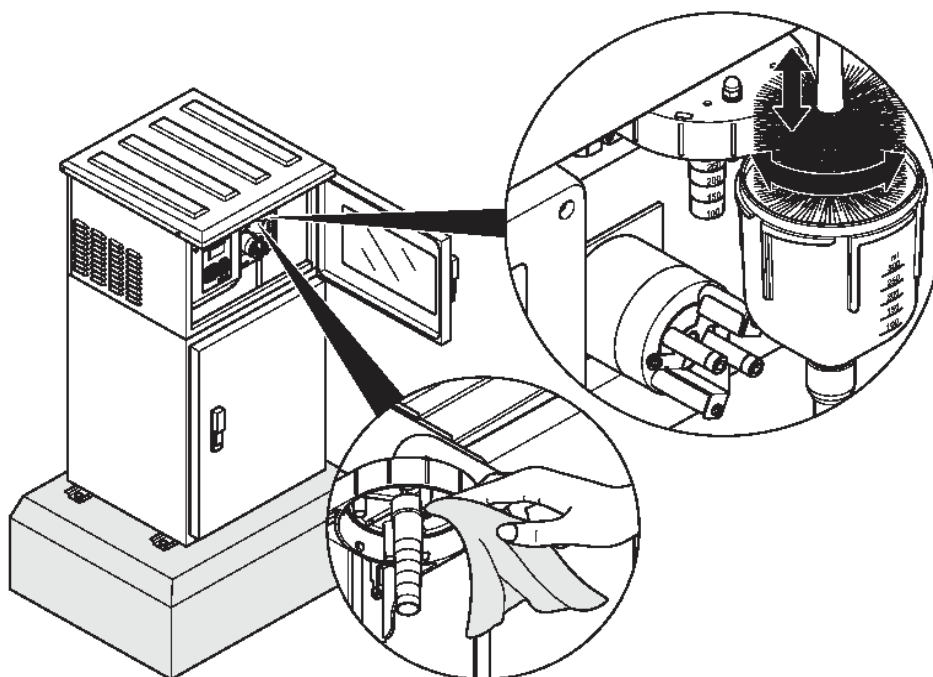


Figure 67 Clean the dosing vessel

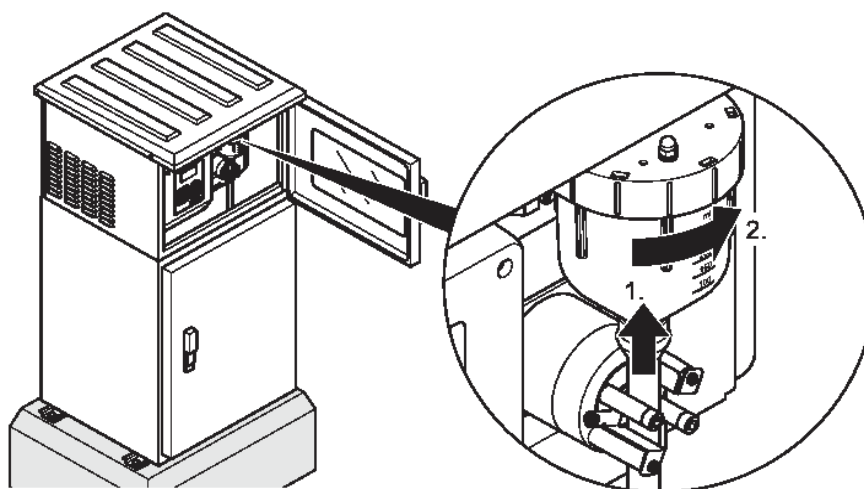


Figure 68 Install the dosing vessel

5.3 Troubleshooting

If the equipment does not function as required, check the fuse and replace if necessary.

5.3.1 Open the housing to change the fuse (SP5 B)

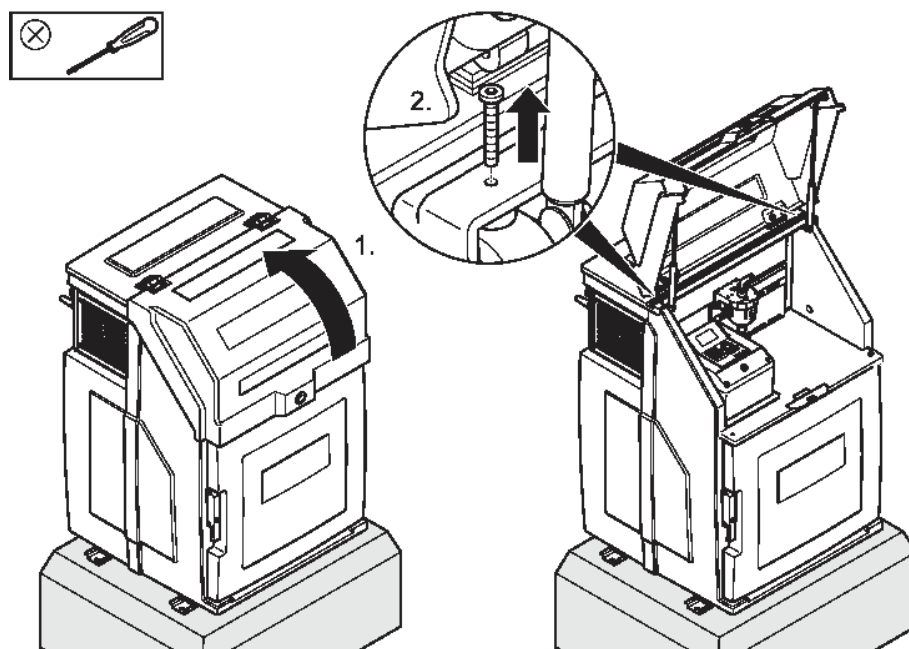


Figure 69 Open the lid and detach the cover (SP5 B)

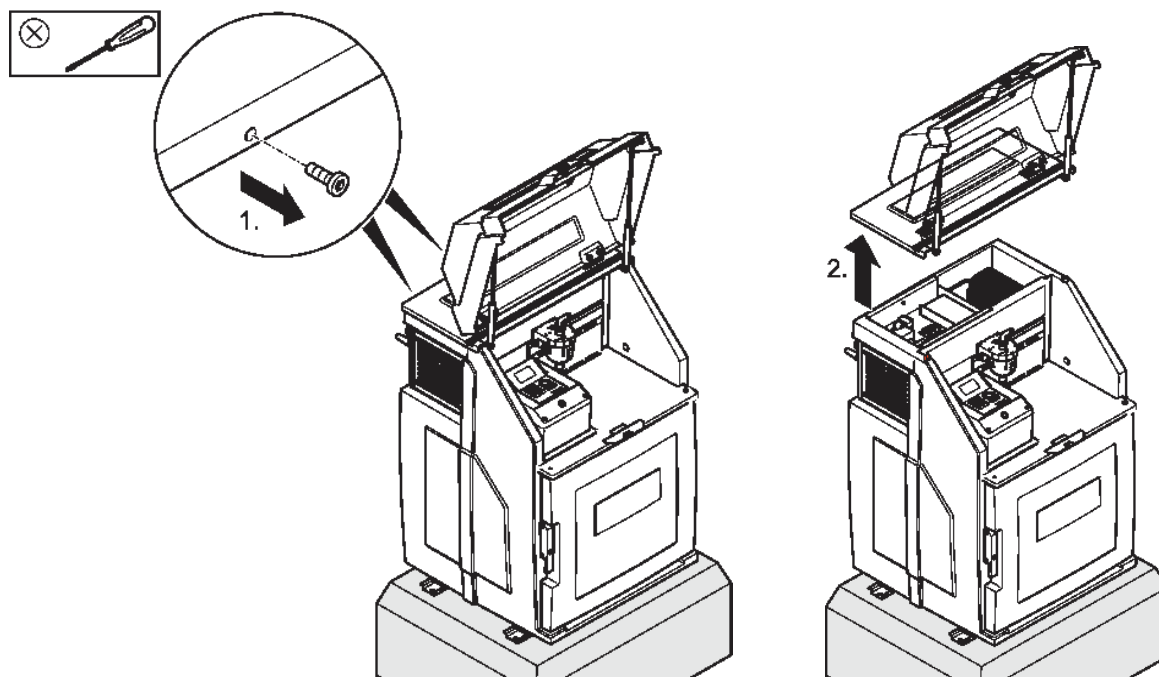


Figure 70 Remove the safety cover (SP5 B)

5.3.2 Open the housing to change the fuse (SP5 S – SP5 S-MS)

Open the housing lid as described in [figure 15, page 18](#) and [figure 16, page 18](#).

5.3.3 Change the fuse

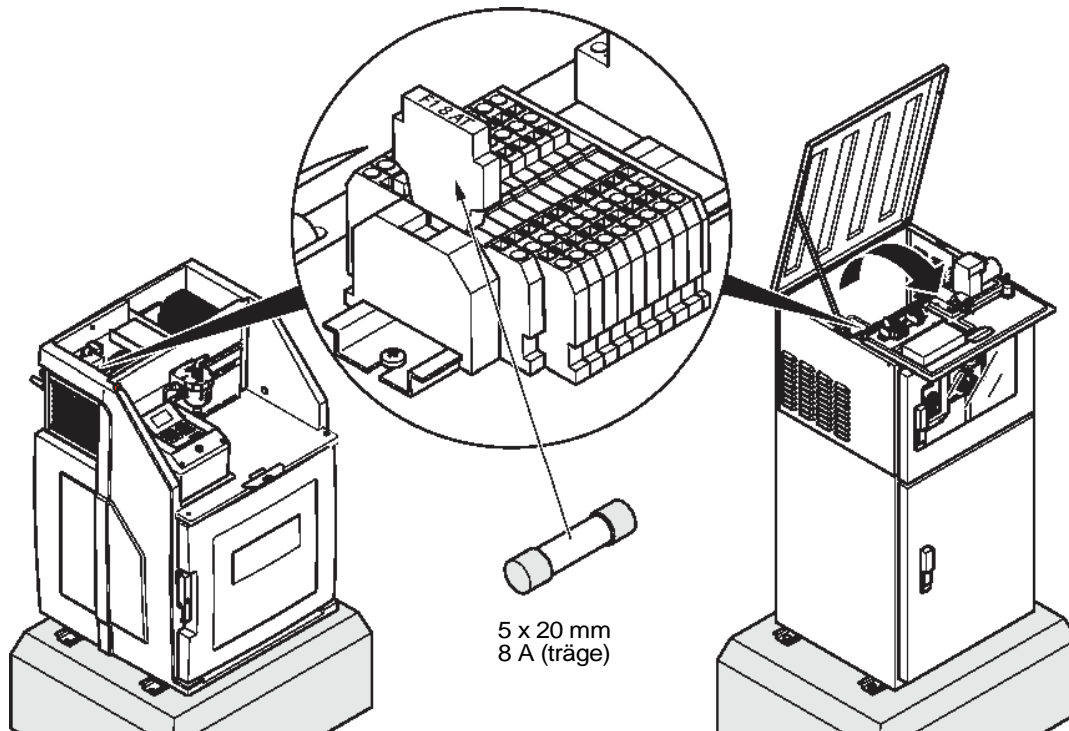


Figure 71 Fuse support

If the problem is not fixed after having checked or changed the fuse, please contact the customer service.

5.3.4 Reassemble the housing (SP5 B)

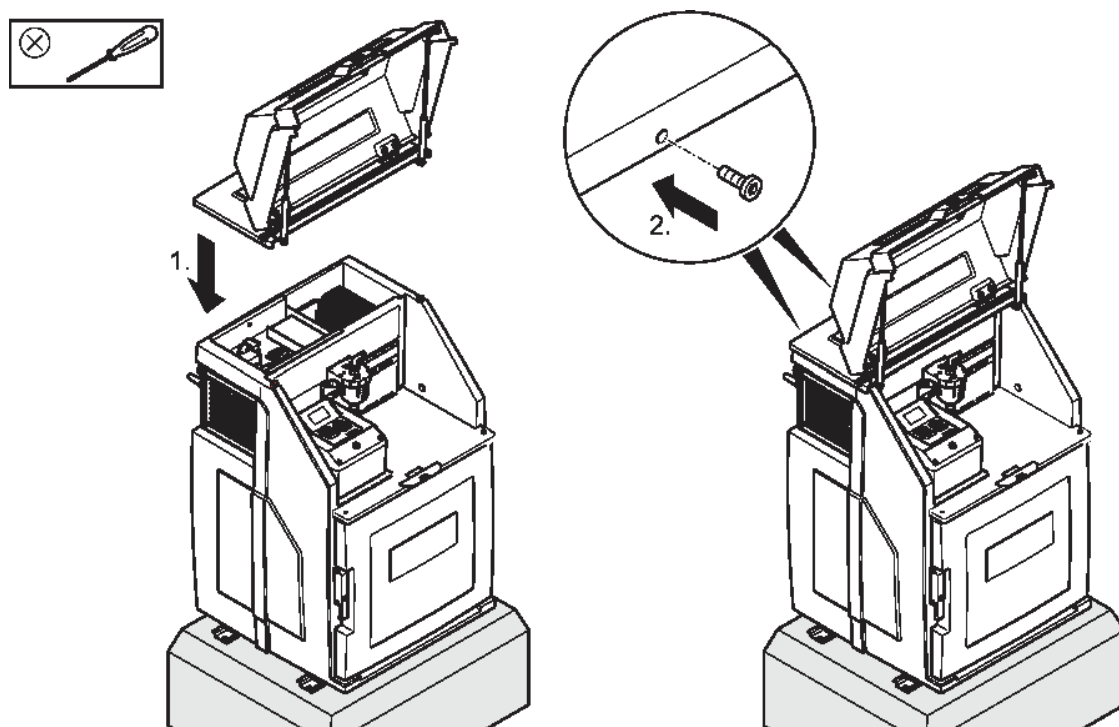


Figure 72 Install the safety cover (SP5 B)

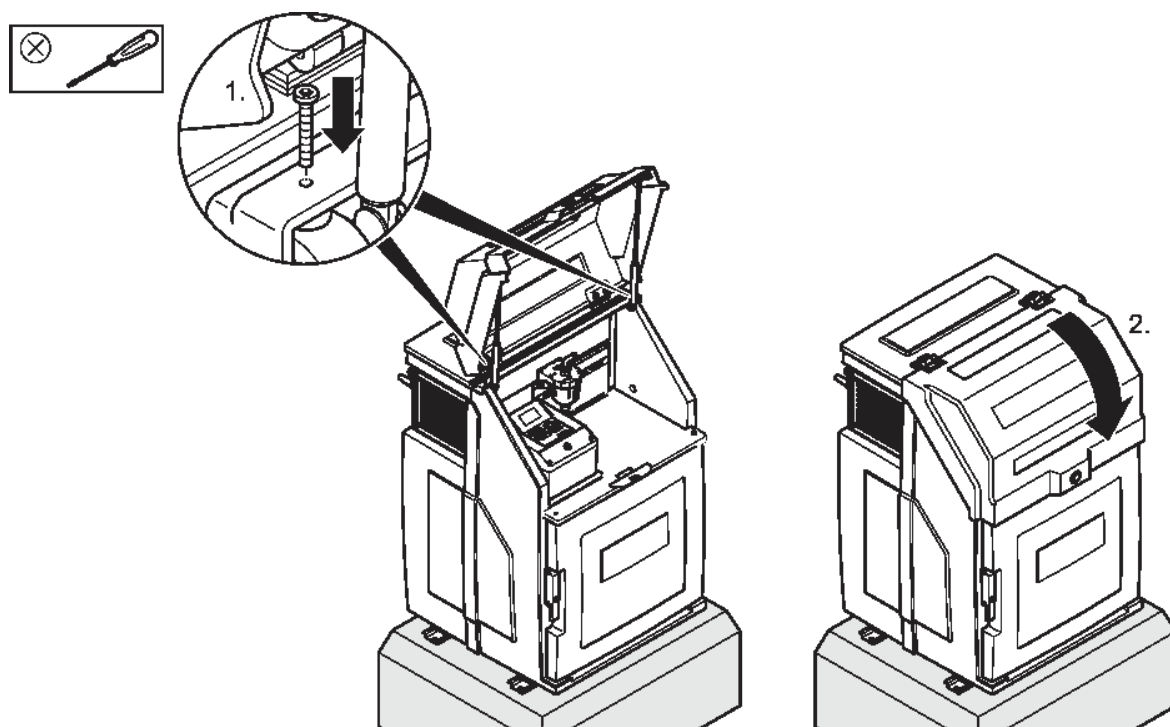


Figure 73 Close the housing (SP5 B)

5.3.5 Reassemble the housing (SP5 S – SP5 S-MS)

Close the housing lid as described in [figure 20, page 20](#), [figure 24, page 23](#) and [figure 25, page 23](#).

5.4 Decommissioning and storage of device

1. Remove all liquids and, if necessary, solid matter from the feed and drain lines and sample containers and clean as required.
2. Close all active programs.
3. Switch off the equipment.

Chapter 6 Spare parts and accessories

6.1 Spare parts

Description	Cat. No.
Short manual	0250029E
Detailed manual	0250028E

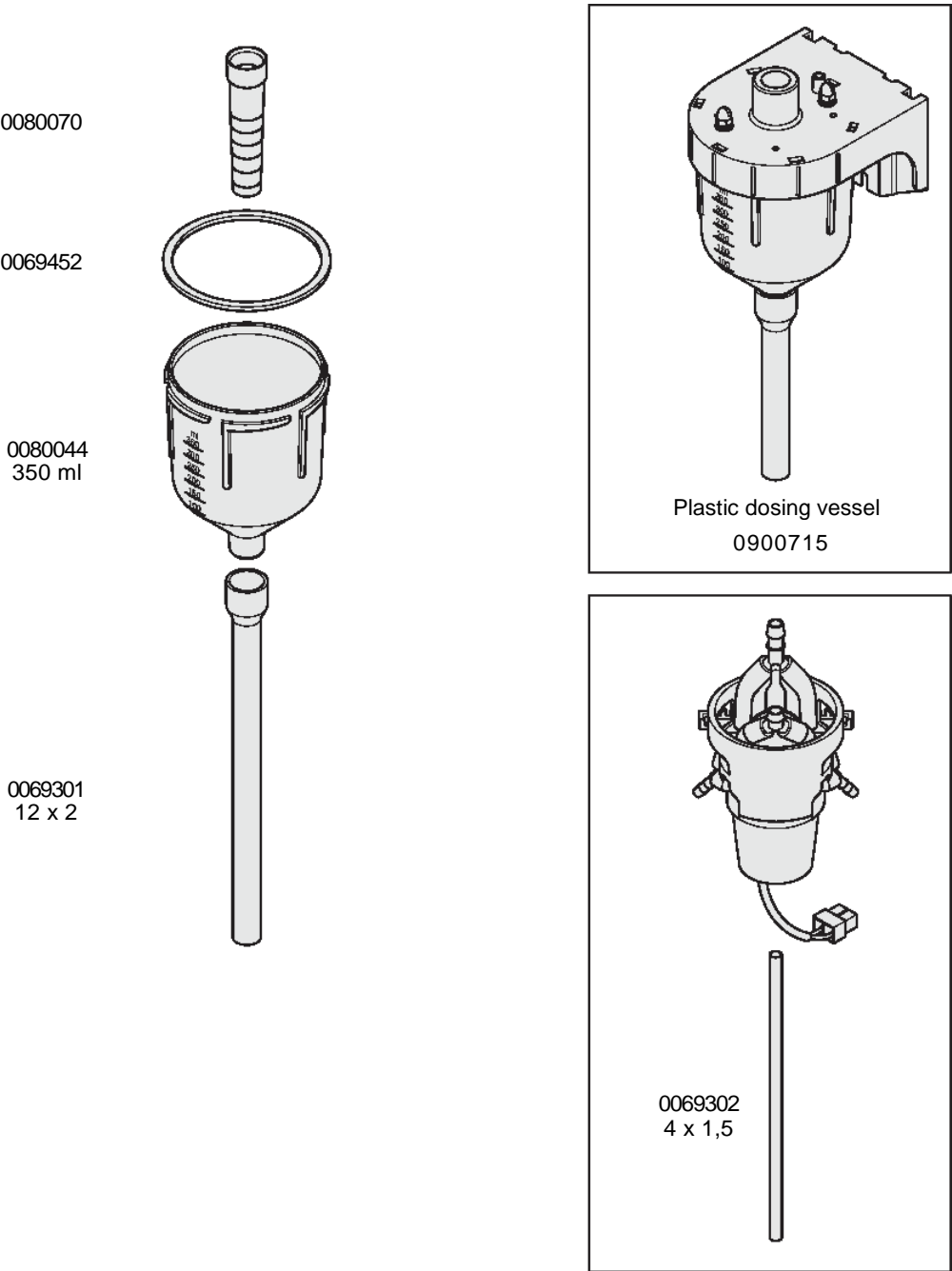


Figure 74 Plastic dosing vessel

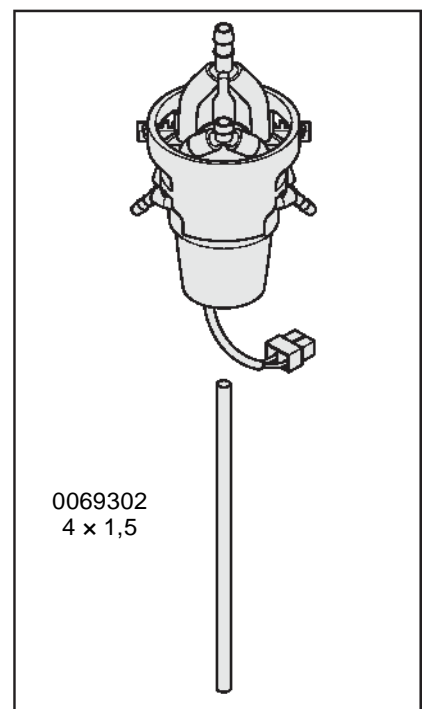
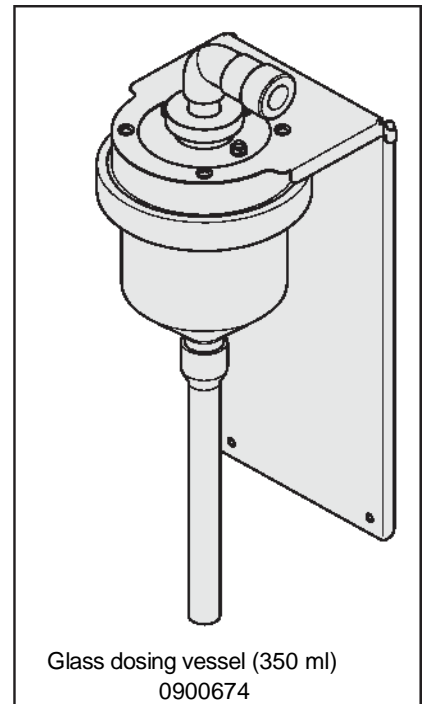
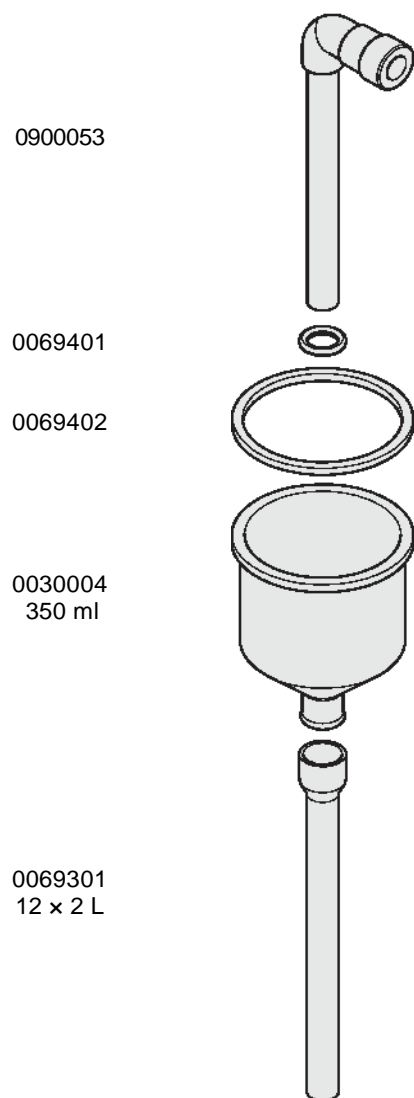


Figure 75 Glass dosing vessel (350 ml)

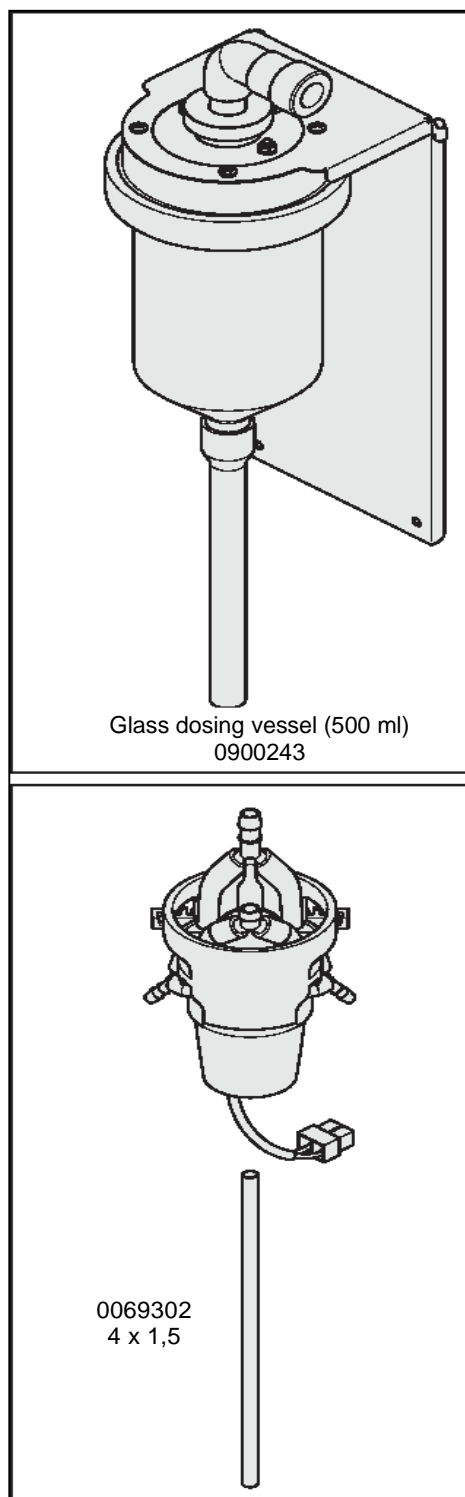
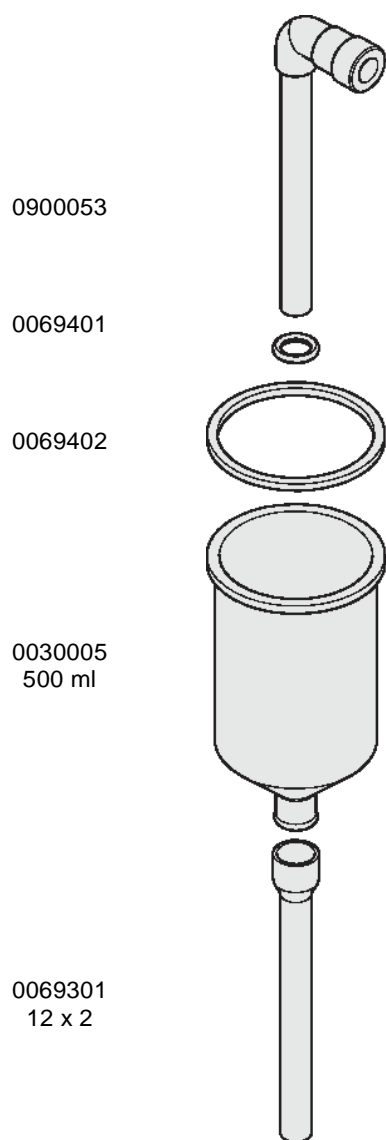


Figure 76 Glass dosing vessel (500 ml)

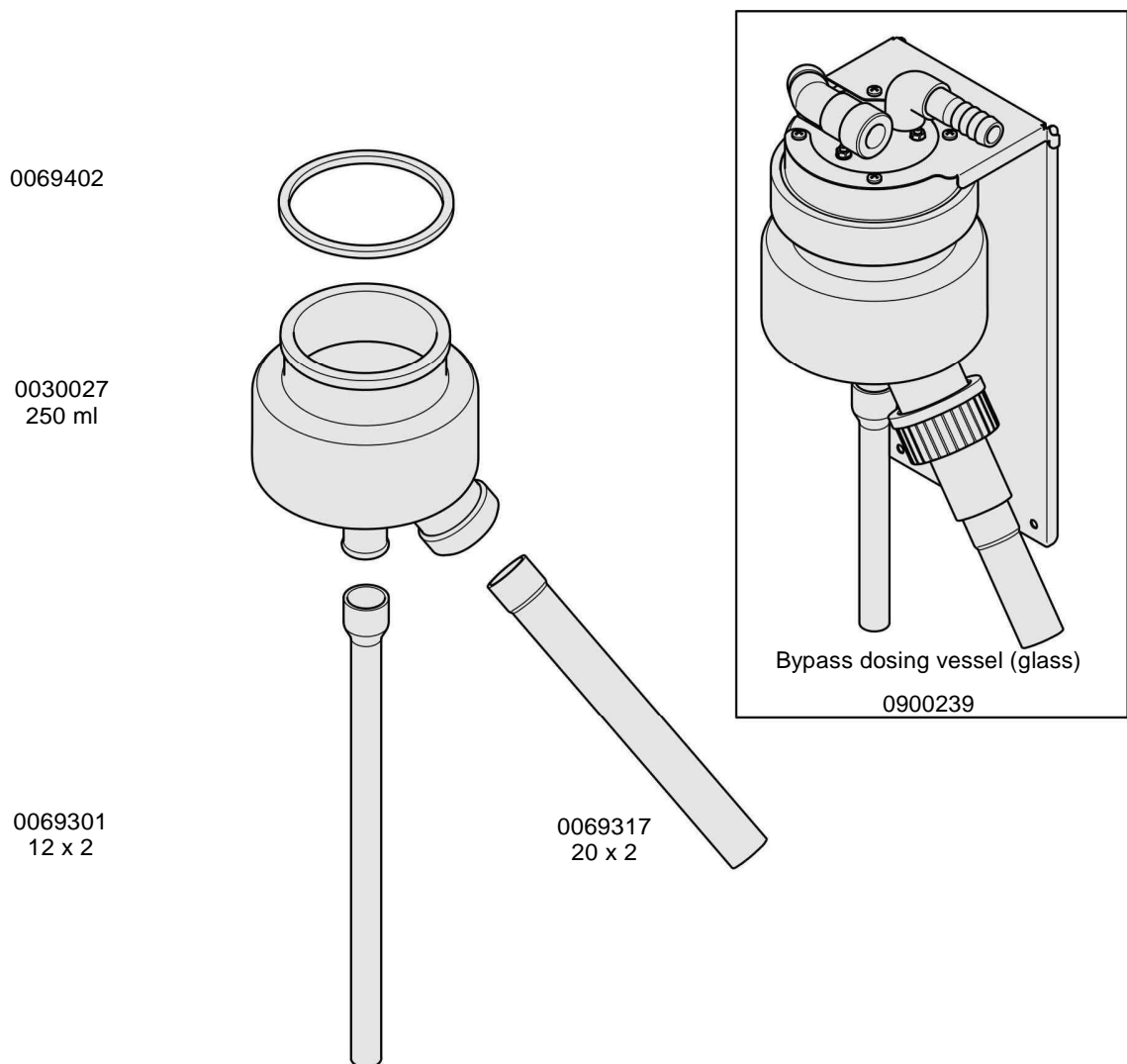


Figure 77 Glass dosing vessel (flow-through)

Chapter 7 Warranty and liability

The manufacturer warrants that the product supplied is free of material and manufacturing defects and undertakes the obligation to repair or replace any defective parts at zero cost.

The warranty period is **12 months** from delivery resp. invoice date. Consumables and damage caused by improper handling, poor installation or incorrect use are excluded from this clause

With the exclusion of the further claims, the supplier is liable for defects including the lack of assured properties as follows: all those parts that, within the warranty period calculated from the day of the transfer of risk, can be demonstrated to have become unusable or that can only be used with significant limitations due to a situation present prior to the transfer of risk, in particular due to incorrect design, poor materials or inadequate finish will be improved or replaced, at the supplier's discretion. The identification of such defects must be notified to the supplier in writing without delay, however at the latest 7 days after the identification of the fault. If the customer fails to notify the supplier, the product is considered approved despite the defect. Further liability for any direct or indirect damages is not accepted.

If instrument-specific maintenance and servicing work defined by the supplier is to be performed within the warranty period by the customer (maintenance) or by the supplier (servicing) and these requirements are not met, claims for damages due to the failure to comply with the requirements are rendered void.

Any further claims, in particular claims for consequential damages cannot be made.

Consumables and damage caused by improper handling, poor installation or incorrect use are excluded from this clause.

MAXX Mess- u. Probenahmetechnik GmbH

Hechinger Str. 41, D-72414 Rangendingen

Tel. +49(0)7471-98481 0 Fax +49(0)7471-98481 44

www.maxx-gmbh.com

email: info@maxx-gmbh.com